



# INDUSTRIAL DEVELOPMENT

AND ITS RECORD

THE INTERNATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION



#### REFERENCE STUDIES

North Dakota	17
Atlanta	57
Ohio	73
Banks	95

Kemmons Wilson is Chairman of the Board of Holiday Inns, the Memphis-based motel chain whose site selection procedures are outlined, beginning on page 10.

9

10

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# INDUSTRIAL DEVELOPMENT AND MANUFACTURERS RECORD

VOLUME 130 • SEPTEMBER 1961 • NUMBER 10

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## CONTENTS

- 6 **Distribution Strategy and Site Selection** (Location Theory: Part III) • Economist Smykay examines some of the relationships between transport and storage costs.
- 10 **Holiday Inns: Site Surveys by the Dozen** • The convenience of the traveling public is the major requirement in siting a motel.
- 17 **North Dakota: Surprising Growth and Potential** • Agricultural wealth and lignite hold the key to the future in the center of North America.
- 49 **ID/MR New Plant Report** • Exclusive monthly coverage of new plants throughout the United States and in Canada and other foreign countries.
- 57 **New Rallying Cry: "Forward Atlanta"** • ID's first look at its home base, where the New South meets the rest of the world.
- 73 **Industrial Ohio: Always a Leader** • What does it take to put a state in the industrial forefront and keep it there?
- 89 **Setting Criteria is the Basis of Facility Planning** • Half the job is done if you can work out clear requirements, says IBM's Matthews.
- 95 **Banks Expand Development Services** • ID's second annual survey of banks reveals growing participation in area development activities by leading banks.

## DEPARTMENTS

- |                 |                              |
|-----------------|------------------------------|
| 2 Check Points  | 101 Briefs                   |
| 4 Letters       | 103 Recent Releases          |
| 53 ID Calendar  | 104 Expansion Planning Index |
| 56 MR in Review |                              |

## OFFICIAL PUBLICATION OF THE INDUSTRIAL DEVELOPMENT RESEARCH COUNCIL

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## **CHECK POINTS**

### **Rotten apples in the barrel!**

There are many publications which prosper by devoting their attention to the embarrassment and humiliation of individuals, the public exposure of the shortcomings of specific groups and organizations, and the destructive criticism of institutions and ideas. With so much wrong in the world, it doesn't take much effort or imagination to build a publication on such a base.

**But, regardless of the financial opportunities, we have always chosen to be positive and constructive in our editorial approach. With allowance for the normal quota of human mistakes, we believe we have been consistent in reporting and supporting people, groups, ideas, and institutions which offered a good example. We think there is a great need in the world to focus attention on patterns of progress.**

Thus, in selecting situations to cover editorially, we deliberately look for success stories. We feature companies which have grown by applying the most advanced techniques of management. We discuss areas in which we find bold and imaginative development programs. We spend a good portion of our time looking for bright spots—areas of special opportunity—to highlight in future issues.

Because our readers have indicated they approve, we have intensified our efforts to identify those people, firms, and areas which deserve notice. During the first half of this year, for example, your editor visited every mainland state and most of the Canadian provinces. Other staff members have traveled extensively to gain first-hand impressions.

The results of these explorations will be found in future issues. We have, in fact, turned up a great many more worthwhile situations than we can possibly cover. We see a wonderful panorama of able people producing impressive achievements in every sector. Only a select few can be covered adequately.

**This means we are going to disappoint at least one reader who wrote us recently and urged a series of articles on problem areas. "In your travels, you must occasionally run across messy situations which ought to be corrected" he said, urging us to "give 'em hell."**

Obviously, we do encounter many messy situations. We have an unusual opportunity to compare areas, programs, and people. It doesn't take long to see the deficiencies when you are making appraisals every day. These are typical of the more obvious messes we've noted in recent months:

A fine Canadian city with pessimistic leaders: we have traveled Canada from Nova Scotia to British Columbia and have seen the great strength of the nation. Most Canadians are aware of their opportunities and are busy probing them with vigor and enthusiasm. But in one city—an area with better-than-average potential—we found an astonishing lack of morale. Almost every leader we interviewed indicated a pessimistic outlook.

## CHECK POINTS

**The Gulf-Coast city with warring factions: this is a city which enjoys a truly enviable competitive position—if the leaders could get together. But it didn't take any research on our part to find that development efforts were completely bogged down as rival factions hurled insults and refused to put the community's welfare before their own petty interests. We found it all in the local paper the day we arrived.**

The big city with the ice-age chamber manager: this is one of the nation's major cities. The chamber of commerce manager hasn't had a new idea in twenty years and he's not going to tolerate any change in his program which was, at best, suited to the pre-World War II era. When we visited his office it took only a glance at the dust-laden, yellowed papers on the overloaded shelves to see that this group could be counted on to move with the speed of a glacier. The fact that the chamber's Board of Directors tolerated the situation told us plenty about this city's leadership.

The Northern industrial area with labor trouble: this one wasn't tough to spot either. You could stand in the middle of the main access road and hear the silence—not a nail being driven nor a brick being laid. The strike had lasted a couple of months and neither side had conceded anything. Meanwhile the community didn't need us to tell them why they weren't attracting new plants.

The Southern town with race trouble: while we were there, they had another incident which carried two more to jail. A prominent local politician helped by making an inflammatory speech. The chamber of commerce manager told us the racial situation wasn't hurting their industrial development program, but he didn't believe it and neither did we.

The California town which ignores tourists. We happened to have the family along on this trip and on the weekend decided to visit a nationally-publicized attraction near this city. We picked up all the literature the chamber had and departed. To capsule two hours of frustration, we found the chamber's illustrated map to be incorrect, the main road to be poorly marked, and the attraction was on a side road so dusty even the taller trees were brown with silt. The park had been given to the area by an Eastern philanthropist who no doubt is twirling in his grave if he can see its present status.

**Finally, there were three states in which the state development agencies left us with a slight case of nausea. One group was devoting its effort to the Governor's campaign for another office, another was involved in some pretty sordid local political projects, and the third, as far as we could see, was doing absolutely nothing.**

These situations, we hurry to say, are exceptions to the rule. These are the bad apples in the barrel. We don't think they are worth our attention or yours. You won't find them detailed in future issues because we don't propose to waste our space on them.

Happily, even situations as discouraging as these can be remedied. We recall visiting a Southern city about four years ago and finding such a lack of local organization that we cancelled a scheduled editorial project. Now this community has gotten things straightened out and we are about to re-schedule our report. Maybe in '63 or '64 we'll go back to some of the dark spots we saw this year and find them to be bright.

—H.M.C.



*Eyeing a  
new plant site?*

The Texas Power & Light Company invites expanding industry, large or small, to make use of the services of its staff of specialists—skilled and experienced in serving officers and executives of industrial corporations. Without obligation, your particular location problems will be carefully and thoroughly analyzed by those having broad knowledge of industry and facts pertaining to manpower, materials, resources, finance and other important factors in Texas.

*Write, wire or call J. D. Eppright, Director, Industrial Development Division, Texas Power & Light Company, Dallas, Texas. Inquiries held in strict confidence.*

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## INDUSTRIAL DEVELOPMENT LETTERS MANUFACTURERS RECORD

SIRS: We would appreciate two copies each of your Electric Utilities Reference Study (February 1961 issue) and your Gas Utilities Reference Study (June 1961 issue).

Also, if you have made reference studies in the past four years of New Hampshire, Vermont or Upper New York state, we would appreciate two copies of these, please.

My personal congratulations for a most interesting and valuable publication. Keep up the good work!

NAME WITHHELD

SIRS: How may I obtain one copy of your recent survey on the site selection activities of electric utilities? Incidentally, I found a reference to your survey in the Market Information Guide of April 1961.

R. J. EASTMAN

Central Development Dept.  
Food Machinery and Chemical Corp.  
New York, New York

► Reprints of these sections are available gratis.

SIRS: Many thanks for your letter . . . and its most helpful enclosure. We appreciate having these copies of your Community Audits.

At the present time our interest is limited to one area and one possible activity in that area. As a result we probably would not have much use for an automatic distribution of your accepted audits. If conditions change, I know we shall all be very pleased to know that this good service will be available from you.

It is quite possible that we may come back to you with the names of six or seven more specific cities in . . . We shall very much appreciate your cooperation in handling this request as we have the reports you sent to us.

LOUIS J. BURNS, JR.

Indiana Limestone Company, Inc.  
Bedford, Indiana

SIRS: If reprints are available of Dr. Vannevar Bush's article, "The Managerial Profession" published in the April 1961 issue of your INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD, would you please send me 15 copies . . .

D. T. RANDALL

D. T. Randall & Company  
Detroit, Michigan

SIRS: Under our membership with the American Management Association we receive the regularly issued publications of the Association. On numerous occasions we have obtained Association approval to reprint carefully selected articles for distribution to occupants of managerial positions in the Federal Service.

We recently asked Mr. Harwood F. Merrill, AMA Vice President, for permission to reprint the article titled "The Managerial Profession" by Vannevar Bush which appeared in the June 1961 issue of Management Review. In compliance with Mr. Merrill's advice, we would greatly appreciate it if you will grant us permission to reprint Mr. Bush's article. . .

GEORGE A. YOUNG

Personnel Division  
Agricultural Marketing Service  
U. S. Dept. of Agriculture



## REFERENCE STUDIES

Since before the turn of the century MANUFACTURERS RECORD has issued special studies of specific cities and areas to assist the site-seeking industrial firm. Today, through the combined coverage of INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD this tradition of leadership in this field is being extended and carried forward. Before you go site-seeking, take advantage of background studies which have already been prepared for the areas listed below. Generally, reprints are available gratis.

Canada, 1961	Aug, 1961
Chesapeake Bay	Aug., 1961
New England, 1961	July, 1961
Maine	July, 1961
Tennessee	July, 1961
Livonia, Michigan	June, 1961
Arizona	June, 1961
Blue Book of South, 1961	May, 1961
Empire Central, Dallas	May, 1961
Edmonton, Canada	May, 1961
New Mexico	Apr., 1961
Keokuk-Ft. Madison, Iowa	Apr., 1961
Northern Natural Gas	Mar., 1961
Odessa, Texas	Mar., 1961
The Gulf-Caribbean Area	Feb., 1961
Area of the Palm Beaches	Feb., 1961
Greater Burlington, Vt.	Feb., 1961
Central New York	Jan., 1961
Missouri	Jan., 1961
Pennsylvania	Dec., 1960
Oak Ridge, Tenn.	Dec., 1960
Berkshire County, Mass.	Nov., 1960
North Bay Area of Calif.	Nov., 1960
The British Isles	Nov., 1960
Indiana	Oct., 1960
Georgia	Sept., 1960
Seattle, Wash.	Sept., 1960
Elliott Lake, Canada	Sept., 1960
Canada, 1960	Aug., 1960
Rock Island Lines	Aug., 1960
New York's Capital District	Aug., 1960
New England, 1960	July, 1960
Washington State	July, 1960
North Carolina	June, 1960
California, South Bay Area	June, 1960
Blue Book of South, 1960	May, 1960
The Mohawk Valley	May, 1960
No. and Cen. California	May, 1960
Alma, Michigan	Apr., 1960
Thomasville, Ga.	Apr., 1960
St. Augustine, Fla.	Mar., 1960
Colorado	Mar., 1960
Gainesville, Fla.	Feb., 1960
Western Pacific Railroad	Feb., 1960
West Virginia	Jan., 1960
Calgary, Canada	Jan., 1960
Hawaii	Dec., 1959
Kansas	Dec., 1959
St. Lawrence Valley	Nov., 1959
Oregon	Nov., 1959
Virginia	Oct., 1959
Staten Island, New York City	Oct., 1959
Oklahoma	Sept., 1959
Fresno County, Calif.	Sept., 1959

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## LETTERS

**SIRS:** . . . The [Empire Central] study is a most excellent presentation and the development as a whole interests us greatly as it has some features which approximate to our own efforts here at Shannon.

Consequently, I should like if possible to obtain further information. I wonder would it be possible for you to get me some layout plans of the overall area, of the community centre, and say, one or two of the individual buildings? . . .

**T. A. CALLANAN**

Shannon Free Airport Dev. Co. Ltd.  
Shannon Free Airport  
County Clare, Ireland

► **Mr. W. C. Windsor, the developer of Empire Central, has been asked to reply direct to Mr. Callanan.**

**SIRS:** As industrial economics and management consultants, we are involved very extensively in the process of advising our clients as to the economic soundness of locating in various areas of the country.

Your publication would be of definite help to us, and our subscription check is enclosed. Also, we note that on Page 79 of the April issue you state that "Editorial Service and Plant Location Reports" are available for several areas on a no-charge basis. We would appreciate very much receiving these for Seattle, Ohio River Valley, Columbus, Savannah and Knoxville. . . .

**L. T. PATTERSON, JR.**  
The Arrington-Van Pelt  
Organization  
Cincinnati, Ohio

**SIRS:** If I remember correctly, not so very long ago you published either a plant location or an industrial park development manual. I shall appreciate the favor if you would notify which it is.

In any event, in addition to the above, do you have a publication listing all the municipalities which have industrial development programs.

**ALBERT H. FOSTER, Director**  
Management Services  
George Fry & Associates  
New York, New York

► **Mr. Foster is referring to our annual industrial park report and the Site Selection Handbook, the 1961 edition of which will be off the press in mid-October.**

### TWO ADDED TO IDRC PROVISIONAL BOARD

Two top planning executives have been added to the provisional Board of Directors of the Industrial Development Research Council, which has been editorially endorsed by ID. These two members are J. S. Goeddel, Manager, Real Estate Department, Procter & Gamble Company and R. W. Pearson, Director of Production, American Machine & Foundry Company.

The IDRC is a new professional organization devoted to the advancement for more scientific methods, techniques and procedures in the field of industrial expansion planning. For information concerning membership, contact the IDRC c/o Conway Publications, Inc., Atlanta 19, Georgia.

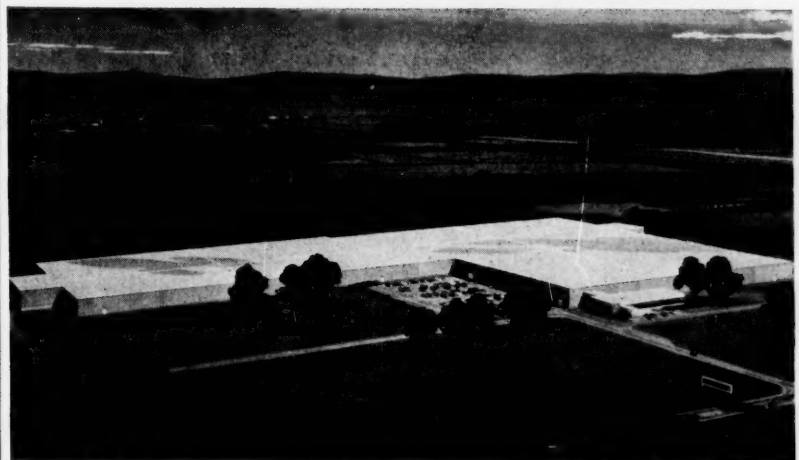
Ooops! Last month, on page 62, we misspelled Ted Schulenberg's name, under his picture. We usually get it right, as for example on page 48 of last October's issue in our story entitled Indiana: Open Door to Progress.



# PENNSYLVANIA

KEYSTONE OF INDUSTRY

## New Partners in Industrial Growth



Corning Glass Works chooses Pennsylvania for its new assembly plant



Speaking for Corning, R. Lee Waterman, Vice-President and Manager of Consumer Products Division, points out, "In selecting a site, we had to evaluate the obvious factors of materials,

manpower, taxes, transportation and other elements related to the specific operation planned.

"In addition to measuring up excellently on all these counts, Greencastle, Pennsylvania, impressed us by the progressive attitude of its community leadership. We were also strongly influenced by the attractiveness of the area as a place to live, by the adequate housing available, and the enthusiasm of the people of the Greencastle area is welcoming new industry.

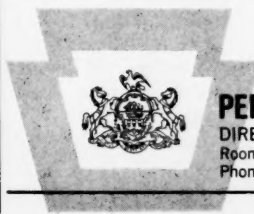
"Certainly another important factor in our decision was the constructive attitude

and close cooperation shown by the Pennsylvania Industrial Development Bureau in supplying important information and statistical data.

"Greencastle represents Corning's fourth plant in Pennsylvania, and our progress since its opening convinces us we made a wise selection."

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**LOCATION THEORY:**

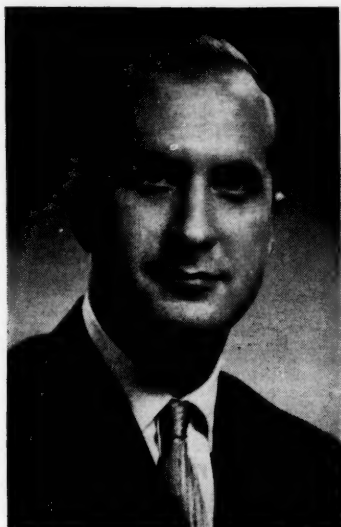
**PART III**

# **AND DISTRIBUTION STRATEGY SITE SELECTION**

*By Dr. Edward W. Smykay*

This third in ID's technical series presents a survey of the application of systems analysis to the strategy of distribution — taking into consideration transport, inventory, and storage costs to determine optimum location. The basic principles suggested here should be of value to all who are engaged in facility planning programs.





A member of the American Economic Association and the American Society of Traffic and Transportation, Dr. Smykay is associate professor of general business at Michigan State with degrees from Rutgers, and the Universities of Maine and Wisconsin. One of his major undertakings is a mass transportation study of Milwaukee.

**R**eports indicate that the large majority of plant location is based on minimizing cost. In a particular type of operation, usually one or a small number of critical factors influences final decisions. Most frequently cited in the popular press are labor differentials related to production costs and state business tax differentials as they affect total cost.

Of considerable importance is the physical distribution cost associated with moving raw materials to plant sites and finished products to customers. Distribution costs are now reported as the third largest cost of doing business in the United States. They are defined as the cost of moving the product (transportation) and storage (warehousing and inventory). Management may control physical distribution to a greater degree than any other category. Labor, for example, is frequently subject to standard wage rates under union contract. Its supply also tends to cluster around a limited number of points, following population distribution points.

A growing number of plant and warehouse location decisions is predicated on distribution concepts. This orientation is due, in large measure, to new analytical techniques which provide insights into total distribution costs.

While historically industrial executives were concerned with manufacturing costs, only limited corporate resources and intellect were devoted to the analysis of movement problems. Since World War II, the accelerated rise of freight costs caused reassessment of this traditional view.

In the first stage of this new orientation, management concen-

trated on control of the most obvious of distribution costs—transportation. But it soon became apparent that minimizing transport expense does not assure minimizing total distribution cost and that reduced costs in one area of distribution might result in increased costs in others. For example, a lower expenditure on transportation may substantially increase inventory costs. Armed with this principle, systems analysis, oriented to total cost reduction, was born. The purpose of this brief article is to present the interrelations of transport, inventory, and storage costs to extended market areas of fixed plant locations.

### **Freight Rate Structures and Location Decisions**

The higher the level of freight rates, a major element of physical distribution cost, the more likely will there be a large number of plants to serve regional or local markets. If, for example, freight rates dropped to zero, then production costs would be the sole element determining plant location causing locations to cluster at points of least production cost.

But as freight rates rise, it becomes economical for high-production-cost locations to compete effectively in spatially separated markets. So long as freight rates continue to rise, regional development is enhanced.

### **Effect of Warehousing and Inventory on Location**

It is axiomatic that the cost of doing business increases generally as more warehouse points are developed. If goods are stored in a larger number of points, then the investment cost in distribution increases. Increased warehouse points also increases inventory expense. A recent study showed inventory cost to increase about 20 per cent when two storage points were used instead of one. The degree of increase depends largely on the characteristic of market demand and the level of customer service desired by management.

### **Interaction of Freight Rates and Inventory Costs**

The pull of increased freight rates is toward a larger number of plant locations. Conversely, increased expense of carrying finished goods tends to restrict the number of plant locations and warehouses in a particular industry.

Of course, for a specific industry, freight rates may actually decline, contrary to the general movements of average rates. The greater reliance on cost elements in rate making has already resulted in substantial rate reduction on specific commodities. The recent "Paint Case," permitting incentive rates closely tied to rail cost, illustrates this trend.

A final qualification on freight rate increases relates to changing technology of transportation. With rapid adoption of more economical methods of moving specific commodities, specific freight rates may decline. Illustrating this point are the new tri-level cars in the movement of automobiles. Rate reductions up to 50 per cent have been reported as a result of this innovation. As a result, at least one manufacturer has quietly shelved plans for construction of three new assembly plants. The general trend toward containerization and unit loading indicates further reductions on the foreseeable horizon.

### Distribution Strategies and Location Decisions

Decisions involving single plant locations require relatively simple methods of analysis when oriented to minimum cost criteria. But a plant requires a logistic system in its support to enhance development of material resources and to satisfy market requirements.

Least flexible in decision making

is plant location. Most flexible in support of plant activity is re-design of distribution strategies and their attendant systems. Proper design of distribution systems frequently permits ill-located plants to extend their useful economic life, while poorly conceived distribution systems can easily cause premature economic demise of well located plants.

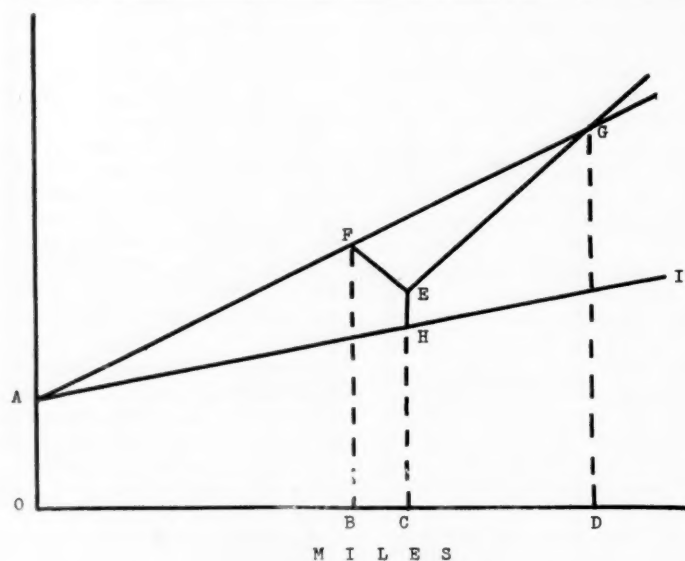
### Warehouse Function in Distribution

In Chart 1 below, a warehouse installation is placed at C in the distribution mix.

OA = Plant cost of production  
AFG = Direct shipping cost at small shipment size  
AHI = Consolidated shipment cost in truck-load or carload quantities  
C = Warehouse location  
EH = Warehouse operating and allocated investment cost  
EF, EG = Local delivery cost from warehouse  
BD = Warehouse service territory  
OB = Plant service territory

OA is the cost of manufacturing a product. The line AHI represents transport costs via rail carload shipments, while AFG indicates less-than-carload shipments.

Warehouse capital and operating costs are shown as EH. EF and EG are local less-than-truck-load costs of distribution. At point B, costs of shipping in small volumes from plant to customers located at that point are exactly equal to costs via warehouse operations. This point separates the warehouse service territory from the plant market area.



The triangle EFG shows cost reduction a unit basis for the warehouse. By measuring total demand in the warehouse area, a distribution budget for warehouse operations may be constructed to show probable total profit or loss for the operation.

### Distribution Mix in Support of Plant Locations

In the simple case above, market extensions result from warehouse inclusion. But rather fixed transport alternatives were assumed. In real cases, the distribution alternative chosen depends on such considerations as: 1) value of product, 2) volume of demand, 3) size of shipment, 4) customer service standards, 5) distance, and others. Because of these diverse circumstances, a distribution mix will include many transport alternatives to suit individual product and market characteristics.

For example, referring to Chart 1, beyond D, distribution should shift back to direct shipment, bypassing the warehouse. Yet, it is invariably true that the majority of firms adhere to warehouse use for all points outbound from the plant beyond the warehouse. The reader may check with his transport group to prove this point to his satisfaction. Yet, it can be demonstrated that fixed shipping rules of this type invariably lead to profit dilution.

### Conclusion

In this brief article, attention was focused on distribution strategy as an avenue to assured plant profit and maximum market penetration. In many cases, plant sites remain fixed by management direction. In such cases, distribution programming is one satisfactory alternative to provide logistic support for plant activity. While this field is new and complex, the available kit of tools is more than sufficient for purposes of designing distribution systems to more adequately achieve corporate goals.

A list of sources dealing with this new area of business follows:

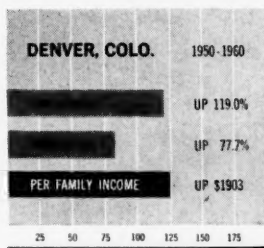
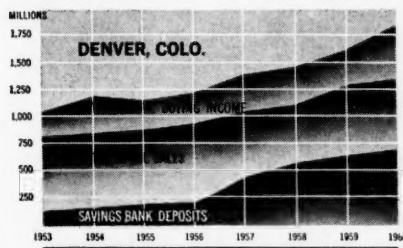
- Alderson, Wroe. *Marketing Behavior and Executive Action*, Part II. Homewood, Illinois: Richard D. Irwin, Inc., 1957.
- Greenhut, M. L. *Plant Location in Theory and Practice*. Chapel Hill: University of North Carolina Press, 1956.
- Management of the Physical-Distribution Function*, AMA Management Report No. 49, American Management Association, Inc., New York, 1960.
- Smykay, E. W., D. J. Bowersox, and F. H. Mossman. *Physical Distribution Management*, Chs. 6, 7, 8. New York: Macmillan Company, 1961.

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**DENVER** for instance



*Locate your new plant in Denver, where the amazing growth in manufacturing value is 63.5% above the national average. Denver is one of America's "growingest" cities*

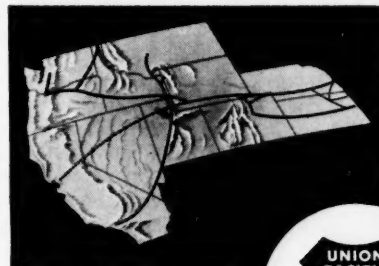


The growth facts of "the Queen City of the Rockies" may be seen on the chart above. A mile above the sea, Denver nestles against the eastern face of the mountains, beckoning industries that are looking ahead.

Among Union Pacific's industrial sites is a fully developed tract, about four miles from downtown. Union Pacific's main line runs along the south border of the tract, and Denver's east-west expressway will be built paralleling the north side.

Some well known industries are already established in this tract. When you locate here you will have main line service to the east, and to all the west. First to bring rails to Denver, and a pioneer in bringing industry here, Union Pacific offers unsurpassed transportation.

*Locate in the West—where 9 out of 10 industrial markets are out-pacing the national growth.*



For more detailed information on this or other sites in the West, see your nearest Union Pacific representative, or address

Industrial Development Department  
**UNION PACIFIC**  
 Railroad  
 OMAHA 2, NEBRASKA



By James L. Hutter, Jr., Assistant Vice President  
Holiday Inns of America, Inc.



COVER STORY

## HOLIDAY INNS: SITE SURVEYS BY THE DOZEN

As of September 1, 1961, there were about 200 Holiday Inns open and operating in 32 of the United States, ranging from Massena, New York and Montreal, Canada, in the north, to Key West, Florida in the south, and Montclair, California in the west.

As our system has grown up, Holiday Inns has developed its own methods of evaluating communities as possible locations of new motels and of spotting the best sites in these communities. Our recent experience in Gary is an example.

day to and from the airports in Chicago, where a passenger can catch the fastest planes to any destination he may choose. Gary's municipal airport also provides two runways, the north-south being 3,600 feet and the east-west, 4,600 feet. The Helicopter service is today carrying 400 passengers a day to and from Gary, and expects this to increase to 500 in 1960. It reports that 70% to 80% of its passengers are salesmen calling on the industry in Gary.

There is no commercial airline service, due to the nearness of the

With more than 190 Inns already open and many more in various stages of planning, the Holiday Inns organization has a site-selecting operation unusual in its scope. Here, the head of the company's real estate activities outlines the careful analysis of many factors which precede the location decision, using as an example a unit opened recently in Gary, Indiana.

Gary and her sister cities of the Calumet — a heterogeneous mass of huge plants — represents one of the world's greatest concentrations of heavy industry. The year 1960 finds the Calumet with a population nudging 500,000, with Gary — now boasting the world's second largest fully-integrated steel plant — alone counting nearly 180,000. Six trunkline railroads and seven arterial highways — including the Northern Indiana Toll Road — serve the area. Three big industrial harbors handle over 15 million tons of cargo annually.

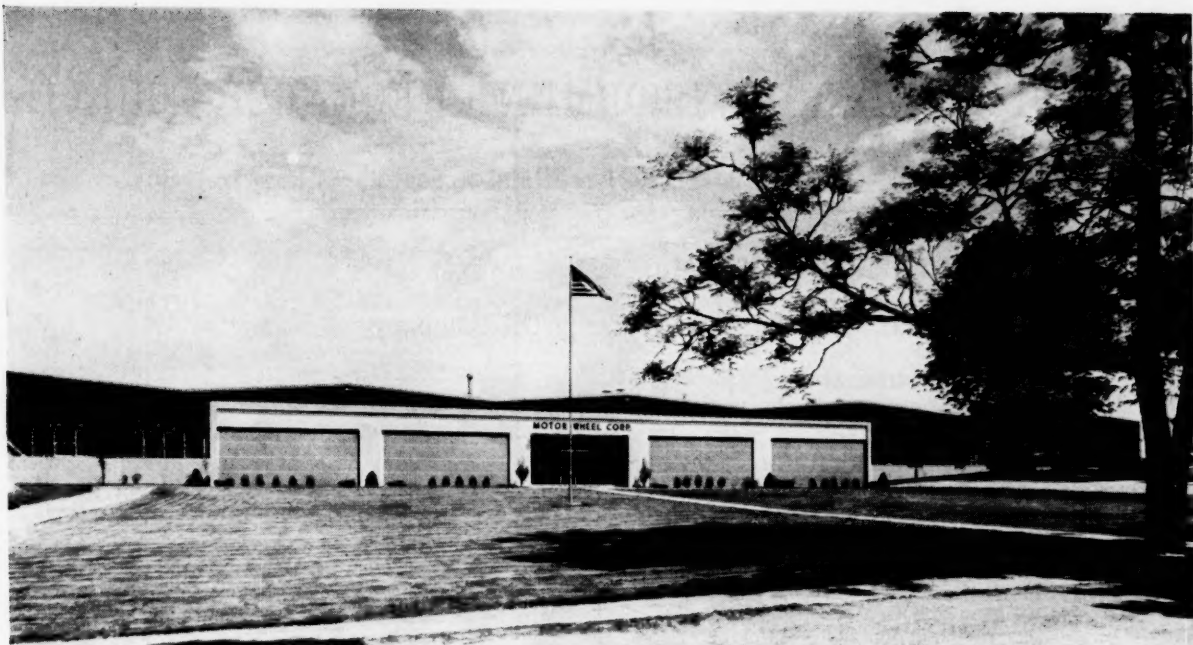
Marketwise, it is a big area, too, pouring close to \$450 million a year into the channels of retail trade. Gary by itself accounts for a monthly industrial payroll exceeding \$23 million.

Gary is next door to any and every part of the world. Chicago Helicopter Airways provide three flights a airport to Chicago. The airport is

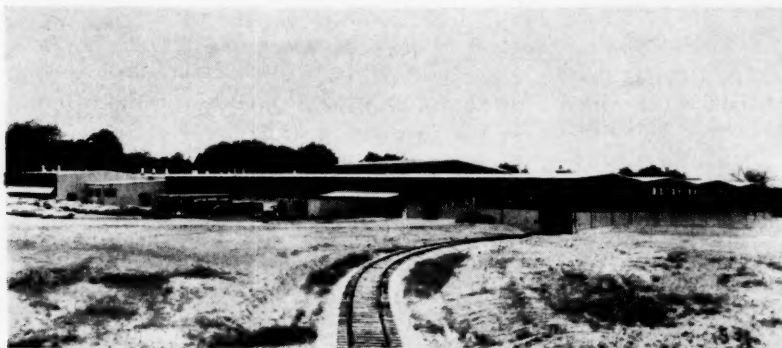
essentially a storage-service center for executive-type and smaller aircraft. U. S. Steel, Inland Steel, Midwest Steel, Republic Steel and Standard Oil are among its users, and their planes are A-26's, Lockheed Venturas, Convairs, DC-4's and C-46's.

94 trains per day carry some 5,000 passengers in and out of Gary. In addition, the South Shore Electric Inter-urban carries about 10,000 in and out daily, mostly to and from Chicago. It takes 45 minutes and the fare is only \$1.29. Cleveland is 5¼ hours away by rail, Pittsburgh 7, and Washington and New York both 13½. The salesmen calling on Gary industry use the trains extensively, and they are coming from and going to Chicago, Cleveland, Pittsburgh, Washington, Philadelphia and New York.

Most of the salesmen calling on Gary industry use the planes and trains. However, Midway airport is



*The 121,000-sq.-ft. Motor Wheel Corporation building at LaGrange, Indiana, is a well designed production tool and a real asset to the community. In addition to colorful, low-profile beauty, such features as overhead offices and storage to save floor space, plenty of room for overhead equipment attached directly to the steel framing, and custom-designed facilities for shipping and receiving were specially incorporated to meet Motor Wheel's particular needs.*



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STRAN-STEEL IS A DIVISION OF NATIONAL STEEL CORPORATION

# THE INDUSTRIAL DEVELOPMENT RESEARCH COUNCIL

First Annual Conference • October 24-25, 1961 • Hotel Roosevelt • New York City

## PRELIMINARY CONFERENCE PROGRAM

General Chairman: DR. FRANK J. SODAY, Skelly Oil Company

### TUESDAY OCTOBER 24

- 8:30 REGISTRATION & ISSUANCE OF CREDENTIALS.
- 9:30 STATEMENT OF IDRC OBJECTIVES. H. McKinley Conway, Jr., President, Conway Publications, Inc.
- 10:00 SYMPOSIUM: *Company Organization for Expansion Planning*. N. M. Martin, Director of Facilities Planning and Construction, IBM. Raymond Sydansk, Manager of Real Estate Dept., Armstrong Cork.
- (COFFEE BREAK)
- R. W. Pearson, Director of Production, AMF.
- J. W. Anderson, Director of Facilities Planning, AMP Incorporated.
- Discussion leaders:
- J. S. Goeddel, Manager, Real Estate Department, Procter and Gamble. (\*)
- Wm. E. Prather, Vice Pres., Plants and Facilities, The Lau Blower Co.
- 12:30 LUNCHEON. *Speaker to be announced.*
- 2:30 SYMPOSIUM: *Project Feasibility Analysis*.
- INDUSTRIAL ECONOMICS VIEWPOINT - J. C. Clamp, Director of Commercial Development, General Mills.
- OPERATIONS RESEARCH VIEWPOINT - A. W. Wortham, Manager, Planning and Management Systems, Texas Instruments, Inc.
- MARKET RESEARCH VIEWPOINT - F. P. Minnelli, Director, Market Planning, Yale and Towne Manufacturing Co., Inc. (\*)
- (COFFEE BREAK)
- ENGINEERING VIEWPOINT - Wm. B. Bishop, Director of Facilities Planning, A. E. Staley Mfg. Co.
- Discussion leaders:
- Jay A. Shors, Coordinator of Facilities Planning, Ball Brothers Co.
- Dr. F. R. Darkis, Vice President, Research, Liggett and Myers Tobacco Co.
- 4:30 FILM: "Blueprint For Progress."

### WEDNESDAY OCTOBER 25

- 9:00 THEORETICAL BASE FOR INDUSTRIAL EXPANSION PLANNING. Dr. M. L. Greenhut, author, "Plant Location Theory".

Discussion leader:

Robert E. Johnson, Economist and Actuary, Western Electric Company.

- 10:00 SYMPOSIUM: *Methods of Location Analysis and Site Selection*.

G. P. Gaffney, Manager of Facilities, The Martin Company.

James L. Hutter, Jr., Director, Real Estate Activities, Holiday Inns of America, Inc.

(COFFEE BREAK)

Elmer D. Gates, Manager, Facilities, Defense Systems Dept., G. E.

Discussion leaders:

Peter J. Short, Jr., Manager, Real Estate, Lukens Steel Company. (\*)

Grove G. Thompson, Manager, Real Estate Dept., Mack Trucks, Inc.

- 12:30 LUNCHEON. *Speaker to be announced.*

- 2:30 BUSINESS SESSION.

REPORT OF ACTING SECRETARY. J. F. Nicholl, Vice President of Planning, Chicopee Mills, Inc.

PRESENTATION OF CONSTITUTION AND BY-LAWS FOR ADOPTION.

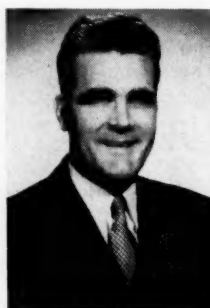
NOMINATION AND ELECTION OF DIRECTORS AND OFFICERS.

REPORT OF ACTING TREASURER. Frank L. Willis, Treasurer, Eberhard Faber, Inc.

STATUS OF MEMBERSHIP, REGISTRATION, FINANCIAL SUMMARY.

- 3:30 ADJOURN.

(\*) Acceptance not confirmed.



Dr. Frank J. Soday is one of the nation's top scientists in the field of appraising the feasibility of proposed industrial facilities and analyzing locations. As a key executive of Chemstrand Corporation and General Dynamics Corporation he participated in studies which resulted in large new facilities in the United States, Northern Ireland, Japan, Italy, and Spain. He has just accepted a position with similar responsibilities at Skelly Oil Company.



**EDITOR'S NOTE:** Background information on IDRC can be found in the March and July, 1961, issues of ID. Further details concerning the founding, meeting or membership in this new professional association, contact IDRC, c/o Conway Publications, 2592 Apple Valley Road, Atlanta 19, Georgia.

#### PROVISIONAL BOARD OF DIRECTORS

The following executives, representing a variety of interests in different aspects of expansion planning, have been chosen to serve as a governing body during the formation of the IDRC. At the first annual conference, in October, board members will be elected to serve on a continuing basis. Those who are interested in stimulating scientific approaches to development activities are indebted to these men for their expression of interest and confidence in IDRC.

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AMP, Incorporated

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**James L. Hutter, Jr.**  
Director, Real Estate Activities  
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Economist and Actuary  
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Coordinator of Facilities Planning  
Ball Brothers Company, Inc.

**Peter J. Short, Jr.**  
Manager, Real Estate  
Lukens Steel Company

**Dr. Frank J. Soday**  
Skelly Oil Company

**Grove G. Thompson**  
Manager, Real Estate Department  
Mack Trucks, Inc.

**Frank L. Willis**  
Treasurer  
Eberhard-Faber

**A. W. Wortham**  
Manager, Planning & Management Systems  
Texas Instruments, Inc.

#### CONFERENCE REGISTRATION and/or membership application

SEND TO: Industrial Development Research Council  
2592 Apple Valley Road  
Atlanta 19, Georgia

- ☐ I would like to become a member.  
☐ I am a member and have paid my dues.  
☐ I will attend the First Annual Conference.  
☐ My check for \$25 is enclosed.\*

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### NEW MEMBER APPLICANTS PLEASE COMPLETE THE FOLLOWING:

Telephone number: \_\_\_\_\_

Brief description of company: \_\_\_\_\_

Nature of my duties: \_\_\_\_\_

How many years in planning & development? \_\_\_\_\_

Prior experience in related work: \_\_\_\_\_

Education: \_\_\_\_\_

\*Payment of \$25 covers annual membership dues, conference registration, and cost of official publications.

Please make room reservations directly with:

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Madison Avenue at 45th Street  
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MUrray Hill 6-9200 (area code 212)  
TWX: NY 1-2924

Since this is a rather busy season, the hotel management recommends that reservations be made as early as possible.

#### IMPORTANT NOTICE!

It should be emphasized that only IDRC members will be able to attend this conference. Membership requirements are given elsewhere in this folder. Those who believe they are qualified should send their applications to IDRC headquarters at once so that these can be acted upon prior to the conference.

## HOLIDAY INNS

only 30 miles and one hour driving time from Chicago. For the tourist, it would be extremely convenient to Chicago.

Nine employers located in Gary have 1,000 or more employees, including the United States Steel Corporation's Gary Steel Works — the second largest fully integrated steel producing plant in the world.

Gary has three guided missile bases, with 500 regular troops; a National Guard Armory; a U. S. Naval and Marine Training Center on the Lake Shore; and a U. S. Army Reserve Training Center. Two hospitals are here, the Mercy and Methodist, with 529 beds and 146 bassinets.

Educational institutions include

other employers are still to be received, but the amount of callers is very substantial. Five major plants have located in Gary in the last two years, and the helicopter business has shown a 50% increase in that time.

All of these salesmen, we are informed, stay at the Hotel Gary or at private homes. There are no first-class motels, and the Hotel Gary is considered the only good hotel.

U. S. Steel and Midwest have eating facilities for all employees located in their plants. They likewise have meeting facilities. As a result most of the eating is done in the plant, so far as the noon meal is concerned, and the business conferences are held in the plant.

There are no first-class motels in or around Gary. Probably the best patronized today are two near the airport. These are really the only two motels in the immediate Gary area. Only one has a restaurant, and neither attempt to offer any of the Holiday Inn services.

To witness the crying need of Gary for first-class motel accommodations, two motels are under construction. Their coming into Gary is certainly evidence from them that Gary's needs cannot adequately be served out of Chicago.

Gary now has two good restaurants in the immediate vicinity of the Holiday Inn site. These are close together, and both are located on U. S. 20 just east of the site.

### Site Analysis

The site for the proposed Holiday Inn in Gary is excellent.

The property is located on the north side of U. S. Highways 12 and 20, ¼ mile east of where these highways join to take traffic either to downtown Gary, or to the Indiana Toll Road. This Toll Road, with two interchanges, is elevated through a portion of the city, and connects with the Calumet Skyway for a fast entry to the Chicago loop and the Illinois Tollway. This Toll Road is part of the direct, non-stop toll road between Chicago and New York, through Pittsburgh and Allentown, Pennsylvania. The entrance to the Toll Road is just 100 feet west of the site.

The land is owned in fee by Holiday Inns of America, Inc., and the Inn will be owned and operated by the parent company. Frontage is approximately 330 feet, with an average depth of 350 feet. It is located inside the city limits, has city utilities, and is zoned for motel operation.

About ¼ mile east of the site is a stop light which will slow traffic in its approach to the site. Another factor tending to keep the speed of through traffic down will be the attention of drivers being fixed on signs leading either to the toll road or to downtown Gary, depending on their destination. The grade in front of site is level, and both visibility and access will be excellent.

The downtown business district is 1¼ miles from the site, a matter of 2½ minutes driving time. The new plants of Midwest and Bethle-

A 17-page list of questions has to be answered satisfactorily before Holiday Inns will give serious consideration to locating a new unit. A company executive makes the survey personally and his findings are later incorporated into a detailed feasibility survey which also includes various proposals on financing the new unit.

The location survey, consisting of some 400 items, covers both general factors involving the city as a whole, and details on one or more proposed sites. Special attention is devoted to highway traffic, existing eating and lodging facilities, conventions, club organizations and other factors especially pertinent to motel operations.

Indiana University's Gary Center, Purdue University Technical Extension (at Hammond) and Gary Business College.

To this bustling city, salesmen come in droves. Take the newest steel company — Midwest, which at the present time employs 125 people. They report that seventy-five out-of-town salesmen call on them per day. These salesmen stay an average of one day, including overnight. Midwest will soon increase their employment to 1,600, and it is reasonable to believe that their callers will likewise increase. Midwest is today one of the smallest employers. Figures on out-of-town salesmen and home office personnel from the

However, people in these plants hold their promotion and retirement parties outside the plants, and there are many of these.

The other plants have neither eating nor meeting facilities and need both. The Hotel Gary serves them now.

The convention business is likewise limited to the Hotel Gary. The conventions scheduled so far in 1960 brought in 4,400 guests.

Hotel Gary is a ten-story structure in the heart of downtown Gary, and has been in operation for 33 years. The manager claims a year round room occupancy of 85%. This is considered to be the only good hotel in the county.

# 13 Upper Midwest communities team up to help you pick "THE PERFECT PLANT SITE"

## NORTH DAKOTA

- 1 FARGO                      3 SOUTHWEST FARGO  
2 WEST FARGO

## MINNESOTA

- 4 BORUP                      9 GLYNDON  
5 FELTON                    10 SABIN  
6 AVERILL                   11 BAKER  
7 MOORHEAD                12 COMSTOCK  
8 DILWORTH                13 WOLVERTON

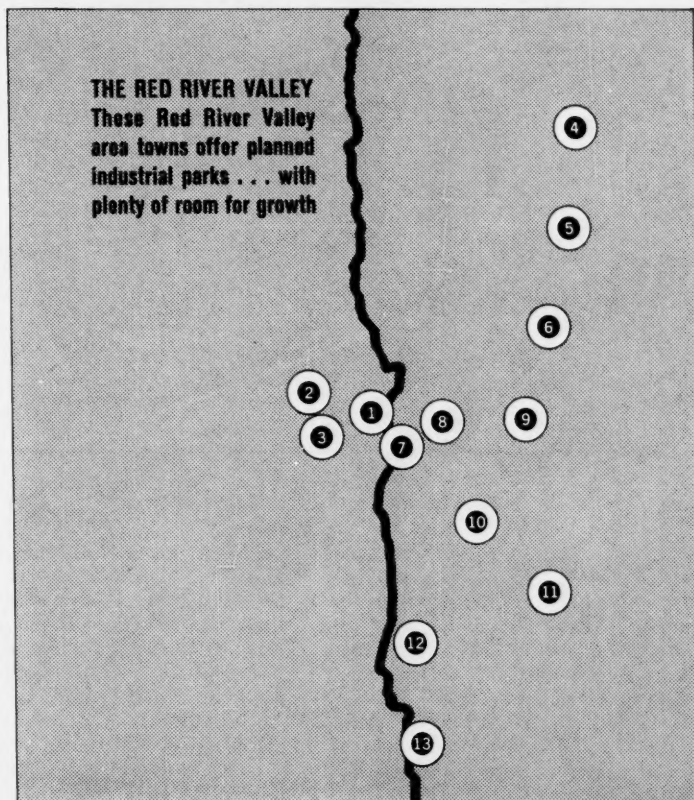
**Looking for a plant site?** Take a *good* look at the fertile Red River Valley! Here is where East meets West . . . where a thriving community of smaller towns is situated near the Metropolitan trading area of Minneapolis and St. Paul.

**Abundant natural resources** . . . and a crack transportation network . . . stand ready to help you cut production costs, widen your market base.

**Manpower is available**—and it's *quality* manpower! Upper Midwest people are among the nation's leaders in education, achievement. Armed forces qualification tests show they score high in ability to absorb training.

**Recreation is tops** in the Upper Midwest, too! And while we know that you wouldn't locate a plant just to be in the hunting-fishing country, it is nice to live and work where there is outdoor recreation almost at your doorstep!

These 13 communities have devised a new approach to plant site development. They have pooled their efforts . . . teamed-up to offer you a wider variety of attractions. Each community offers certain advantages. Yet they all have things in common: skilled



manpower, abundant resources, ready access to important markets. Together, they offer you a choice of locations . . . to meet your specific needs.

**Sound prosperity**—solidly based on a 70 million dollar farm crop . . . over 180 million in retail sales . . . over 400 million in wholesale sales—makes this area one of the most desirable areas in which to build and grow.

This Red River Valley area has another important attraction: electric power aplenty! And the supply is still growing. A vast interconnected network pools the area's power . . . provides dependable reserves for future growth.

**Want more facts?** For a free "Community Survey Fact Book" on the Red River Valley area, just write to NSP's Industrial Development Department, Minneapolis, Minn.

*Best place in America to live and build a business—the Upper Midwest*

**NSP NORTHERN STATES POWER COMPANY**

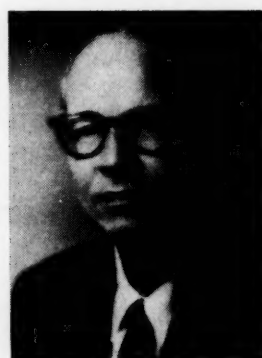
15 SOUTH FIFTH STREET, MINNEAPOLIS 2, MINNESOTA

*Owned by 78,900 shareholders and serving over 600 communities in Minnesota, North Dakota, South Dakota and Wisconsin.*





## HOLIDAY INNS



James L. Hutter, Jr., as Assistant Vice President of Holiday Inns in charge of mortgage loan and real estate activities, has probably been in on more site selections in two years than most men deal with in two decades. Readers will notice Hutter's name among the Board of Directors of the newly formed Industrial Development Research Council on page 13.

hem are 6½ miles east on U. S. 12, a matter of 10 minutes driving time. Less than one mile to the east is the community of Miller, with its excellent residential development and Lake Michigan bathing beach.

Gary is expanding to the east and to the south, and eastward, between the site and the new plant sites, extensive shipping center and residential development is planned.

The bulk of automobile traffic through Gary is east and west, although U. S. 41 is available south to Indianapolis. For tourists who wish to visit Chicago without experiencing the headaches of driving in that city's traffic, Gary would be a logical stopping place. The car could be left at the motel — the Holiday Inn — and Chicago visited by helicopter (16 minutes) or electric railroad (45 minutes).

The only interstate route planned will parallel State Route 51 from the south. This will intersect U. S. 20 about 2 miles east of the site. U. S. 20 will be the only means of reaching downtown Gary or the toll road for points east or west.

The neighborhood of the site is good, with no adverse influences. Across U. S. 20 to the south, for more than 1,000 feet of frontage, is the electric substation of the Northern Indiana Public Service Com-

pany. To the east are nice restaurants, residences and two story apartments. In the rear is the unused right of way of old highway U. S. 12 and 20 and north of that the lines of the South Shore Electric Railroad, which makes for convenience rather than noise. It is proposed to locate a branch of the Gary Trust & Savings Bank within the immediate vicinity of the site, with an opening scheduled for July 1, 1960. The exact site has not been decided upon.

### Referral Business

Due to the strategic location of Gary, particularly with reference to other Holiday Inns throughout the nation, the free advance teletype reservation service should generate a great deal of business between the Holiday Inn of Gary and the other Holiday Inns.

At the last meeting of the National Association of Holiday Inns, the franchisers enthusiastically reported that the teletype service alone, would guarantee a new Inn an occupancy of between 60% and 65% from the day of opening.

Among the major cities within 250 miles of Gary are Indianapolis, Fort Wayne, South Bend, Muncie, Louisville, Evansville, Milwaukee,

Detroit, Toledo, Cincinnati, St. Louis, Springfield, Grand Rapids, Kalamazoo, Lansing, Michigan, Peoria, Rockford, Illinois, Lafayette, and many others. Most of these cities have Holiday Inns operating or under construction, and the rest will probably have them before long.

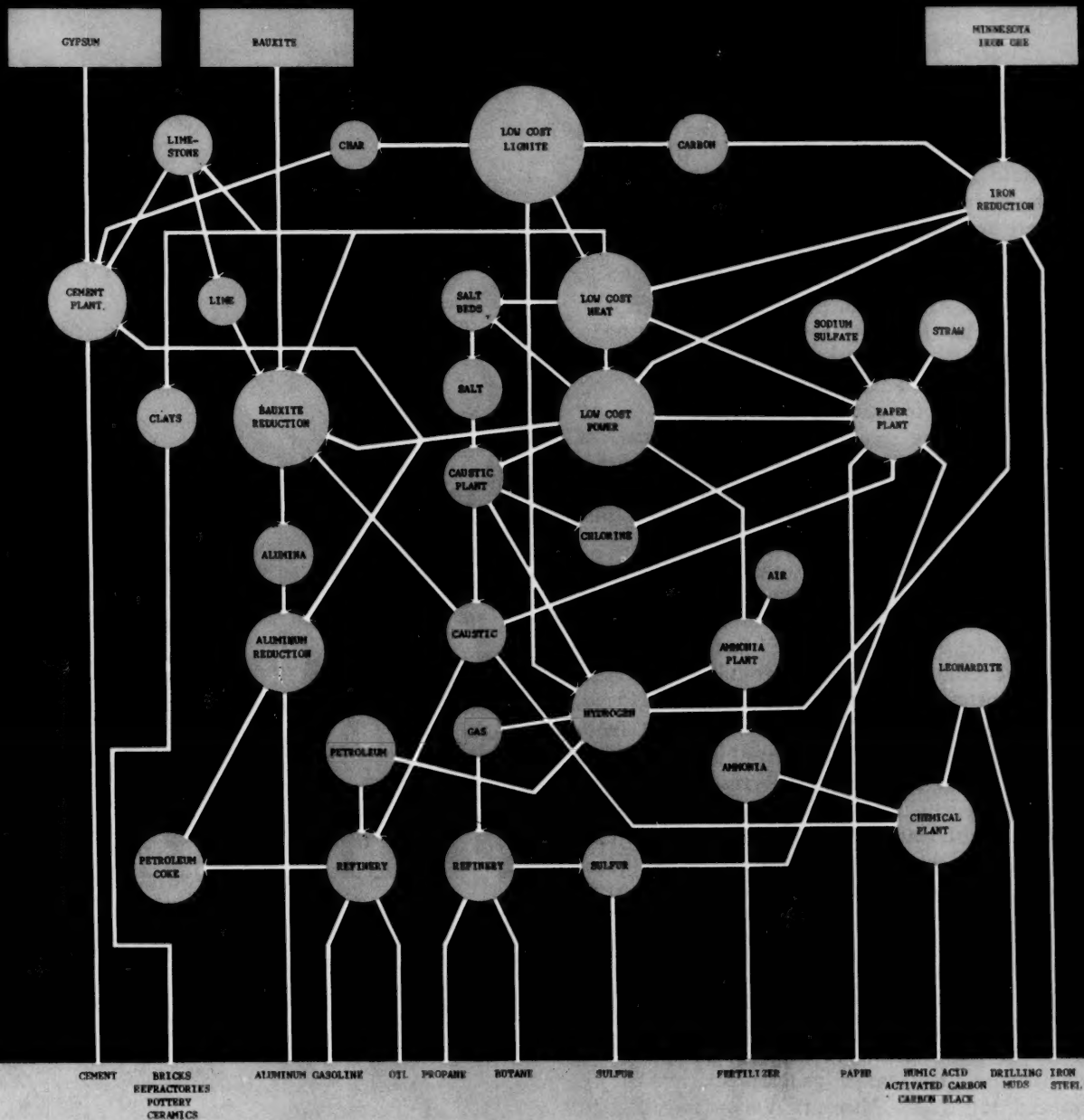
Holiday Inns of America have found from experience that salesmen welcome the opportunity to stay at a Holiday Inn which is close to the downtown section and to industry.

Another advantage of subject site is the fact that public transportation by bus is available both ways every thirty minutes.

To summarize the advantages of the location:

1. Visibility of the GREAT SIGN from all directions.
2. Easy access to the property.
3. Proximity to industry and to downtown.
4. Easy access to the airport.
5. On the only east-west highway — the favored highway — and the one which carries the great bulk of automobile traffic.
6. Adjacent to the Toll Road entrance which provides a direct and non-stop highway from Chicago to New York.





# NORTH DAKOTA

A REFERENCE STUDY BY



THE INTERNATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION  
CONWAY PUBLICATIONS, INC • 2932 APPLE VALLEY RD. • ATLANTA 19, GA.

North Dakota offers large-scale industries the prospect of exceptionally low power costs from its almost limitless store of lignite. Add this to its oil, natural gas, sulphur, salt and limestone and bring in from the outside bauxite, iron ore and gypsum and the accompanying diagram shows some of the potentialities for basic industry now being investigated by leading firms. This is only one line of possible development, as you will see.

"The average U.S. citizen knows more about almost any European country than he does about North Dakota." That's what one frustrated resident told ID's editor in Fargo, and there's good reason to believe the statement is based on fact.

There is no doubt that many Americans have only a hazy picture of this Northern Plains state, and the state suffers from the misconceptions which exist. An opinion poll in one Eastern city, for example, recently produced these returns from 25 queries "what comes to your mind when North Dakota is mentioned":

Eleven interviewees immediately said "snow," or "cold." Nine reacted with "Badlands" or "mountains." There were a few references to cowboys, Indians, Black Hills, tall corn, and Lawrence Welk, and several confessed they just didn't know anything to say.

Even among well-informed business executives, North Dakotans are accustomed to finding that their image is blurred and out-of-focus. The company official in New York or Philadelphia who is aware of some of the positive trends and alert to new opportunities in this region is rare indeed.

What are the facts? Where does North Dakota fit in the nation's future pattern of growth? What are the state's most important resources? What specific opportunities exist for expanding firms both within and outside the state?

To provide answers to these and other questions, North Dakota was surveyed by ID's staff during recent weeks. Your editor scanned the state from border-to-border via low-flying Cessna to gain first-hand impressions.

We flew the rich valley of the Red River; we followed the superhighway bisecting the wheat fields to Jamestown; we criss-crossed the lake country in the state's geographic center; we tracked the green Missouri Valley; we circled Garrison Dam and followed the broad reservoir more than a hundred miles; we saw countless oil wells and tanks in the Williston Basin; and we spanned the scenic Badlands in the Southwest.

Everywhere we were surprised. Our own conception of North Dakota, we found, fell far short of doing the state justice.

Our survey trip was made in mid-summer and we expected blazing heat. Instead we encountered afternoon highs of 85 to 90 — much cooler than the New York City weather we had experienced a few days earlier.

We expected to find the grim aftermath of a nationally publicized drouth. But only in the ex-

## **NORTH DAKOTA: SURPRISING GROWTH and POTENTIAL**

*By H. McKinley Conway, Jr.*



North Dakota's Governor William L. Guy gets a hard hat from Husky Oil Company President Glenn E. Neilson for a tour of the Husky plant at Dickinson, which makes barbecue briquettes for sale throughout the country. The plant is shown on a later page.

**Surveying North Dakota opportunities, the best long-range bet is development of a chemical-metallurgical complex based on impressive lignite and other energy resources. A second major opportunity group includes rapid expansion of processing industries using the state's abundant agricultural products. Moreover, North Dakota offers a very definite plus factor for those seeking a location relatively safe from enemy attack and fall-out hazards. For any enterprise, the state offers sturdy labor conditioned by working on mechanized farms and meeting high intelligence standards.**



When the old Capitol burned in 1933, the State decided to depart radically from the Roman domes and pillars usually considered necessary and put up—at a cost of only \$2 million—one of the most distinctive and functionally suitable capitol buildings in the country. The skyscraper administrative section can be seen for miles over the plains around Bismarck, and the two houses of the legislature meet in impressive quarters in the low wing at the left.

## NORTH DAKOTA

treme Western part of the state did we see fields that were predominantly brown — not unlike the hills we liked so much around Palo Alto, California where we once lived.

Again, we were pleasantly surprised at the attitude of the people. Statistics may say that North Dakota has not kept pace in population growth, but the people we met were not depressed. Everywhere, we talked with citizens who were happy to call North Dakota home and confident that their future is a bright one.

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### Signs of Progress

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We think there is a solid basis for this optimism. We saw many signs of progress — new industries, new civic facilities, new programs for community betterment. Here are some examples:

In Bismarck we attended the open house marking the official start of operations of the new brewery of Dakota Malting and Brewing Company. First in North Dakota, the \$750,000 brewery was wholly financed by stock subscriptions within the state.

Purpose of the open house was to acquaint distributors from North and South Dakota with the new product, which flowed freely amid tables laden with native cheeses and cold cuts. Hosts were C. A. Johnson, President, and Frank Bauer, General Manager.

"It was just a case of raising the money," Johnson said. "We started about eighteen months ago and worked at it." Asked if he thought other ventures could be launched with similar success in North Dakota, he responded with an enthusiastic "yes."

At Williston we toured the Dakota Salt and Chemical Company's new \$2 million plant, where salt is pumped from rich veins 8000 feet below the surface. Discovered during oil exploration activities, these salt deposits drew attention about 1955 and in 1959 General Carbon and Chemical Corporation, Lake Forest, Illinois, became interested.

Financing was arranged under the state Municipal Act and the plant began operations in 1960. Initial production was set at 70,000 tons of salt per year, with a peak capacity of 120,000 tons. The product is distributed throughout the region, in livestock blocks, and in bags for water softening, meat preserving, and for table use.

As salt is withdrawn, the caverns left below are used for storing LP gas. Such storage, which is very economical, is in great demand in North

Dakota because consumers use about five times as much fuel in winter as in summer. There is no effect on the salt.

Another new industry for North Dakota is the potato-flaking plant at Grafton, located there by Borden Company. Looking for a site away from the East Coast, Borden made a study of potato-producing regions and selected the Red River Valley north of Grand Forks. Final selection of Grafton was influenced by cooperation of the local development group which erected a building and leased it to Borden for 30 years with a purchase option.

The Grafton unit, now just one of several potato flaking operations in the region, employs some 200 workers at peak production and purchases about \$500,000 worth of potatoes per year. (It takes about 10 pounds of raw potatoes to produce one pound of flakes — the housewife, of course, adds water to the flakes to expand them to original consistency.)

Next time you visit a grocery store, look for the labels: you may find "Flaky White Mashed Potatoes — made from selected potatoes grown in the famous Red River Valley of the North, by the Red River Valley Potato Flake Company, Grand Forks, North Dakota."

Still another recent North Dakota success is the \$1 million packing plant erected at Fargo by Siouxland Dressed Beef Company, affiliate of Needham Packing Company, Sioux City, Iowa. Financed under the state Municipal Act, the plant has a weekly capacity of 2500 cattle and 5000 to 7500 sheep and calves.

The Siouxland plant is on a 10-acre site leased from Union Stockyards Company. The Southwest Fargo City Commission was the sponsoring body for financing under the State Act. The city has title to the plant and leases it to the company.

North Dakota's recent achievements also include the establishment of a cheese industry in the state. First unit is the Emmons County Cheese Plant, at Strasburg, where American-style cheddar cheese is being made. Another cheese plant is now operating at Oakes.

Also significant is the new \$1 million sodium sulfate plant being built near Stanley by American Colloids, of Skokie, Illinois. This product is shipped to the Southeast for use in the pulp and paper industry.

The oil and gas industry is moving ahead with two important new facilities. Hunt Oil Company will open a new \$2.1 million gas plant at McGregor





One of the state's newest plants, Dakota Malt and Brewing at Bismarck uses local barley and aims at the local market; it's the state's first brewery. With the heavy German population in the state, how can they miss?

Drillers around Williston hit salt beds on their way to oil, and now the state has its own salt industry — a possible first step on the way to a chemicals complex? Meanwhile, Dakota Salt and Chemical has an arrangement with Montana-Dakota Utilities whereby they store LP gas in caverns left by removal of the salt.



Another plant to start up last year was Dakota Clay Products, making sewer tile and other clay products at Dickinson. Funds were raised locally by the sale of stock in the corporation.

## NORTH DAKOTA

in October and TXL-Oil Kem, of Dallas, will open a \$4 million plant at Lignite, probably in September. One immediate result is that gas will be brought from Minot to Bismarck.

Continuing the parade of new enterprises in North Dakota are the Dic-Kota Clay Products plant, making clay pipe at Dickinson; the Core Craft Boat Company, at Jamestown; the North Dakota Wood Preserving Company, at Towner; and the Red River Starch Company, at Grafton.

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### North Dakota Base? Why Not?

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Significantly, the foregoing list of new ventures includes several industries which have never existed in North Dakota. As Lawrence A. Schneider, director of the state Economic Development Commission asserts, "These successful projects are sure to attract others — we believe North Dakota is moving ahead."

As proof, Schneider cites statistics which will surprise many businessmen: using "value added by manufacture" as an index of growth, the latest reports of the U.S. Department of Commerce show that for the 1954-58 period North Dakota enjoyed a 77 per cent increase, ranking **third** among all the states.

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### Leading Manufacturers in North Dakota

#### Meat Packing

Fargo Packing & Sausage—South West Fargo  
Siouxland Dressed Beef—West Fargo

#### Poultry

Swift—New Rockford

#### Butter, Cheese, Ice Cream

Bridgeman Creameries—Minot  
Cass-Clay Creamery—Fargo  
Foremost Dairies—Jamestown  
Mandan Creamery & Produce—Mandan

#### Flour & Meal

N. D. Mill & Elevator—Grand Forks  
Russell-Miller Milling—Valley City (Grand Forks, Minot)

#### Beer

Dakota Malting & Brewing—Bismarck

#### Potato Flakes

Borden—Grafton  
Polar Bear Potato Products—Park River

#### Printing & Publishing

Bismarck Tribune  
Fargo Forum  
Grand Forks Herald

#### Chemicals

Signal Oil & Gas—Tioga  
Standard Oil—Mandan  
Agricultural Supply—Grand Forks

#### Stone, Clay, Glass

Hebron Brick—Hebron  
Concrete Sectional Culvert—Fargo

#### Iron & Steel

Fargo Foundry

#### Machinery (non-electric)

Dakota Lumber & Builders—South West Fargo (wood grain boxes)  
Melroe Mfg.—Gwinner (farm machinery)  
Branick Mfg.—Fargo (auto & tire repair equipment)

#### Transport Equipment

Core Craft—Jamestown (pleasure boats)

#### Miscellaneous, including Ordnance

Turtle Mountain Ordnance Plant—Rolla

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But North Dakota developers are not satisfied with making a good showing percentage-wise. They know their economy has a relatively small base and they intend to broaden. They derive much encouragement from recent experience that North Dakota can attract and keep top-level industrial and commercial activities.

Of special interest are a number of activities which involve highly technical processes and/or the most sophisticated business management. The success of such ventures here will certainly go a long way in changing the national image of North Dakota.

The two men who probably are doing as much as anyone to change the national image of North Dakota business are George Anderson, President, and Harold Bangert, Board Chairman, American Life Companies, Fargo. This is an aggressive, imaginative holding company which in the space of a few years has acquired important enterprises in Texas, South Carolina, and elsewhere.

Whereas much Dakota business activity is oriented toward the Twin Cities or Chicago, Anderson and Bangert have their national headquarters in a modern building they erected in downtown Fargo in 1955.

"The airplane makes our operation possible" Bangert explained. "Even in 1945 we were only 3 hours from Chicago. Today we are within a few hours of any important city in the country — we don't consider North Dakota to be off the beaten track."

In some respects, Anderson and Bangert believe they are in the forefront of a trend. Many similar firms in the East have begun to decentralize and move into smaller cities. Some have been timid, moving, say from New York to Chicago, and achieving little.

Is a North Dakota business card a handicap in dealing with the ultra-sophisticated offices of Manhattan? Not at all, Bangert asserts. "We get better attention when we visit New York than we could if we were based there," he says. "It's only natural to be more accommodating to a visitor who has come from North Dakota to see you than to someone who came from down the street."

In addition to the example set by his firm in business, Anderson points with pride to cultural assets in North Dakota. "We have a 100 piece symphony and have had for a long time," he said. Items from his art collection adorn the American Life building and attract a stream of visitors.



Insurance executive George Anderson is a prominent advocate of cultural activities in North Dakota. His offices are enhanced by an exhibit of modern art and he talks enthusiastically about the 100-piece symphony orchestra in Fargo.



One of Fargo's more enterprising firms is Branick Manufacturing, which makes tire spreaders and other garage equipment for the national market. No assembly operation this — Branick's skilled operators machine all the components, and disprove the notion that metal-working skills are hard to come by in an agricultural area.



Harold Bangert, one of North Dakota's top spokesmen on the national business scene, maintains affiliations with Lehman Brothers in New York and other large interests.

## 11.5 per cent of U. S. Fuel

You will be hearing much more in the next few years about North Dakota's lignite and its water. Both have been there all along, but the lignite used to be neglected because of the high cost of moving it and the Missouri's water was not harnessed until the completion of the Garrison Dam in 1954.

Times have changed, and the inhabitants of the Flickertail State now have the prospect of power and water running out of their ears. Completion of the Garrison dam has created a reservoir of 23 million acre-feet and the installed hydroelectric capacity is 400,000 kilowatts. This is the largest reservoir now in use in the country after Lake Mead, which has 29.8 million acre-feet.

The whole course of Garrison reservoir is through a lignite area extending into Montana, with reserves in North Dakota estimated at 350 billion tons, and accounting for more of the total U. S. fossil fuel supply — on a BTU basis — than does Pennsylvania's coal! This has been known for years, but the new development is the increased interest in lignite-fired thermal power plants and in high-voltage transmission lines.

The success of Alcoa's aluminum reduction plant in Rockdale, Texas, which derives its power from lignite strip-mined and burned for power on the plant site, has stimulated a study of the possibilities of using North Dakota lignite in large quantities at a plant located on the mining area.

The lignite in North Dakota accounts for about 11.5 per cent of all known solid fuel reserves in the United States. Over large areas it is covered by relatively light overburden and can be strip-mined at low cost. A Minot company, Truax-Traer Coal, has been in operation since 1927 and now has 22-cubic-yard stripping shovels gulping away to clear the path for 4-cubic-yard lignite loading shovels.

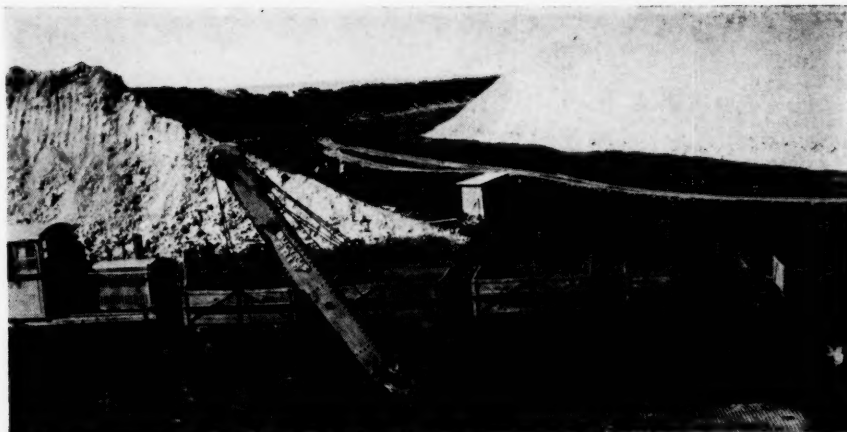
Annual production in the state has been running at about 3 million tons a year, and present commitments for power companies are overtaking losses in consumption for domestic heating.

Production costs of lignite averaging 6,500 BTU's per pound range as low as \$1.35 per ton, and this is the secret of the low-cost power potential discussed elsewhere in this report. The great prospects lie not in shipping out the power, as there are not yet any really massive power users within economic range of present transmission facilities,

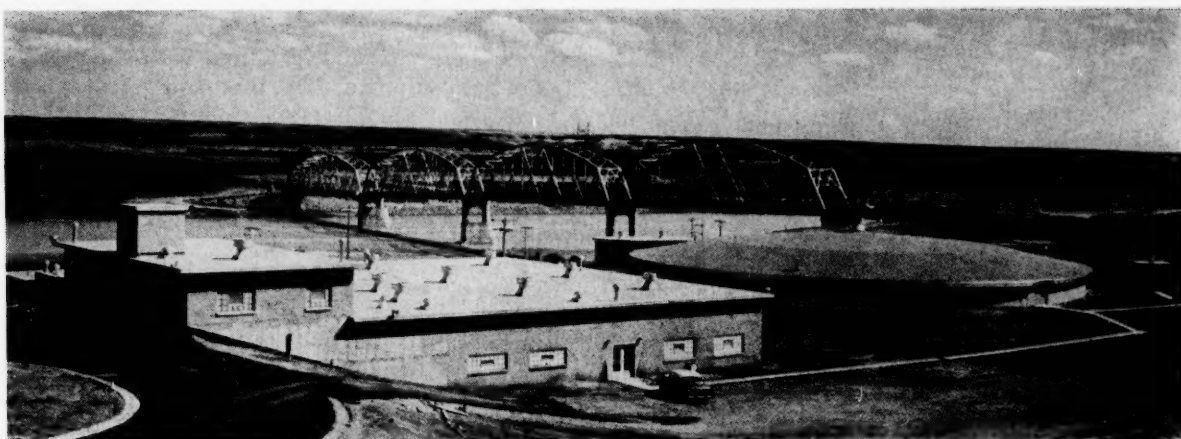


Already going strong is one lignite-using industry — the Dickinson plant of Husky Oil Company which makes briquettes for barbecue fans. A vast and complex industry grew up in Germany based on "braunkohle", which is similar to North Dakota lignite, and plenty of interest is developing on the prospects of a comparable growth here.

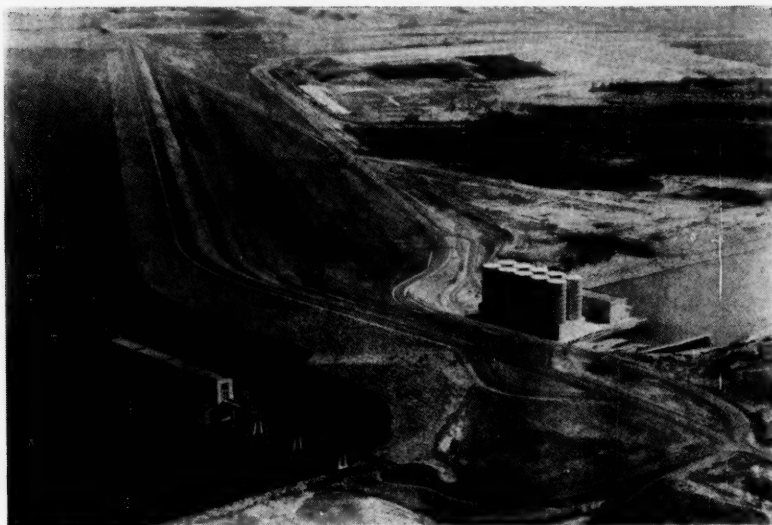




Truax-Traer Coal Company of Minot has four strip-mining operations in the state accounting for the greater part of the total production. At this mine near Beulah a thick seam of lignite comes near the surface, giving an exceptionally favorable ratio of overburden to recoverable coal. The company uses shovels of up to 22 cubic yards for overburden and 4-yard shovels for scooping up the lignite and dumping it into haulage trucks — at the rate of one truck every two or three minutes.



Williston, near the head of the Garrison Reservoir on the Missouri, has no water worries. Its newly built supply installation can furnish 36 million gallons a day.



This huge pile of dirt is Garrison Dam — more than two miles long and containing 67.5 million cubic yards. The reservoir extends more than a third of the way across the state and is second only to Lake Mead in size. The ten round surge towers surmount the power house, where five units of 80,000 kilowatts each have been installed to make use of the 120-foot head at the intake in the left foreground.

## NORTH DAKOTA

but in using it in large industrial plants on the spot.

One of the uses most discussed is to build an aluminum smelter to process alumina from the Gulf Coast and ship the refined aluminum to rolling mills in the Midwest. The calculated combined power costs and freight rates on alumina from the Gulf to North Dakota and aluminum pig to the Midwest are actually less than for the recently developed smelters on the upper Ohio. There is the further advantage of using water power from the Garrison Dam for part of the year. No other large hydroelectric plant has the advantage of being so near a large and cheap source for thermal power.

Nearby in Minnesota are deposits of anorthosite that are being investigated as alternatives to bauxite in the production of alumina. If alumina could be produced nearby, there would be a large saving on shipping costs for alumina from the Gulf Coast. Also a possibility is the use of lignite in new processes of smelting Mesabi iron ore and taconite from northern Minnesota. Still another is the use of power to produce ammonia and nitrates for blending with Montana phosphates into fertilizer.

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### Williston Basin Means Oil

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John C. Gunness, Executive Director of the North Dakota Petroleum Council, told us the state now ranks 9th in reserves and 12th in production. Now producing in the state are such firms as Amerada, Hunt, Texaco, California, Pan Am, Shell, and Skelly.

This is one of the few states which set up a conservation program before production began, he said. "We are the leaders in wide spacing and other measures which cut economic waste," Gunness declared.

Another factor favorable to drillers here is that land ownership is in larger blocks and leases may be assembled more easily.

The Williston oil basin was one of the major developments in oil exploration within the United States during the '50's. Production comes from 13 counties, with the bulk of the 1959 production of 18 million barrels supplied by Williams, McKenzie and Burke counties. Of the 82 million barrels drilled by the end of that year, 43 million had come from Williams County (Williston).

Reserves are calculated conservatively at 381 million barrels, but responsible estimates of 750 million barrels of proven reserves can be found.

Over half of the state's crude has been piped to Mandan and refined at the Standard Oil of Indiana plant at Mandan, which can handle 40,900 barrels a day. Williston has its own home-owned Westland Oil Company, whose refinery has a capacity of 2,500 barrels a day. Not far away is the Signal Oil and Gas Company's Tioga plant which processes natural gas to turn out LP gases, natural gasoline and sulphur.

Smaller plants recently established include the Great Western refinery at Dickinson, part of whose outputs is jet fuel.

With salt and sulphur in addition to its oil, gas and lignite, the state has a good start toward providing the essentials for a basic chemical industry.

Other mineral resources include bentonitic clay — 240 million tons of it — some uranium in the lignite desposits, and an estimated 23 million tons of sodium sulphate. Clay, sand and gravel abound in many parts of the state.

A man with a particularly keen insight into North Dakota's potential is Hank Reed, Great Northern geologist we interviewed in Williston. A native of New Jersey and graduate of Williams College, Reed has been here 9 years and loves it. He has four children and asserts that this is a wonderful place for them.

Reed's presence here as a permanent resident is proof of the high regard GN's Department of Minerals Research and Development has for the Williston area. Made up of geologists, metallurgists, chemists, and engineers, the group has made a series of studies which indicate opportunities here for a wide range of activities.

Within a 100-mile radius of Williston, Reed lists these resources: potash, lignite, clays, salt, sulfur, bentonitic clay, oil and gas, alumina clay and sodium sulfate.

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### Center of North America

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North Dakota's position in the center of the North American land mass does not mean that it is inaccessible or useless like the Dead Heart of Australia or the desert plateaus of inner Asia or the Gran Chaco in South America. The average elevation is only 1,900 feet and the state is actually in the center of a continuous plain stretching all the way from the Gulf of Mexico to the Arctic. The divide between Gulf and Hudson Bay drainage crosses the state but at many places it is inconspicuous and it forms no obstacle to transportation.

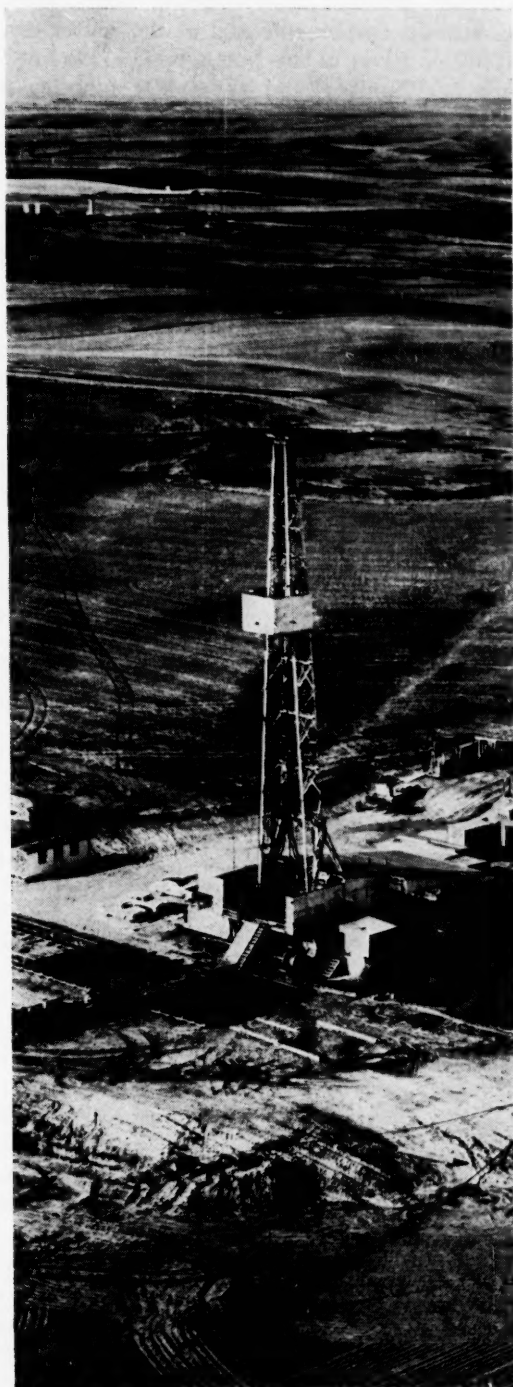


One of the men with the most encyclopedic knowledge of tangible opportunities in North Dakota is Hank Reed, New Jersey-born geologist for Great Northern Railroad. He came to North Dakota nine years ago with a petroleum firm and decided to stay.



Exchanging progress notes are (left) John C. Gunness, executive secretary of the North Dakota Petroleum Council and (right) Alvin A. Mayer, prominent North Dakota banker.

No forests of derricks clutter the Williston basin oil fields, each one pulling away from the others in a mad scramble to exhaust the field. Wide spacing makes for much more efficient recovery and farming goes on undisturbed in all the rest of the land.



## NORTH DAKOTA

More than half the state drains into the Missouri, either directly or into the James, which joins the Missouri after crossing South Dakota. The eastern border and part of the center drains to the Red River of the North, which flows northward to Winnipeg and eventually empties into Hudson Bay. Most of the northern part of the state drains to the Souris, which dips down from Canada as far as Minot before returning northward to join the Assiniboine, which in turn unites with the Red River at Winnipeg.

The Red River valley is one of the most extensive flat areas in the world, having been the floor of glacial Lake Agassiz. Elsewhere the terrain is more varied, but only in and near the Bad Lands of the southwest is there any considerable expanse of land too rough for agriculture.

The rock structure is simple, with a succession of nearly horizontal sedimentary formations like a stack of dinner plates. The most recent underlying the whole state are Cretaceous rocks of marine origin and over these in the western half are Tertiary continental deposits, including lignite. Also in the west are the oil and gas resources of the Williston Basin, which are drawn from rocks of several geologic ages. Both the Tertiary and Cretaceous near the surface have large aquifers that are being investigated as sources of ground water for irrigation.

There are no metallic ore bodies within North Dakota, but the heavily mineralized Laurentian Shield comes near to the state to the north in Manitoba and to the east in Minnesota. North Dakota lignite is the closest source of fuel to the Minnesota iron ore, including taconite, and may well play a part in its further development.

During the Ice Age, the Keewatin ice cap came down into North Dakota from Canada as far as the Missouri River, and left behind vast amounts of thick glacial till, upon which deep soils have developed. Favored by the sub-humid climate, which limits leaching, and the natural grass cover that prevailed almost everywhere before settlement, the state's soils are among the blackest and most fertile in the country.

The combination of soil, level terrain and ease of access by rail makes possible mechanized farming for wheat and other small grains on a colossal scale, and one North Dakota farm family can and does raise as much food as eight or ten European families or scores of Oriental families.

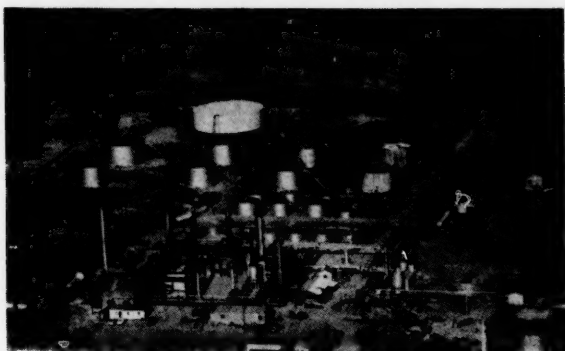
Although North Dakota's climate is much maligned for its extremes, there is no point in deny-



North Dakota's largest industrial installation is the Mandan refinery of Standard Oil of Indiana. It is fed by a 220-mile crude oil pipe line from the Williston and Tioga fields and can handle nearly 41,000 barrels a day. Location of the North Dakota fields a long way from competing fields assures a large market for the output.

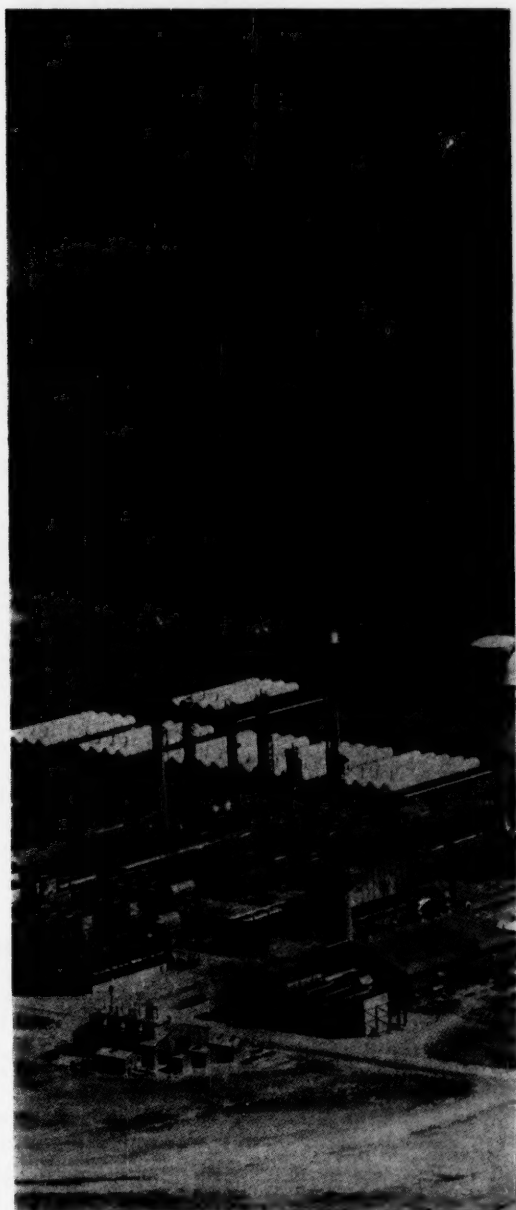


Other oil and gas processing facilities are in the producing area. Second largest oil refinery is home-owned Westland Oil at Williston, with a capacity of 2,500 barrels a day.



Not Texas or Louisiana, but North Dakota is the source of all this sulphur! It is a by-product of the Signal Oil and Gas natural gas processing plant. Add this to the salt and hydrocarbons and maybe you will begin to see a chemist's pipe dreams come true.

Tjoga is the home of the state's largest natural gas processor, Signal Oil and Gas, which puts through 65 million cubic feet daily. Gasoline, butane, propane and sulphur are the results.



## NORTH DAKOTA

ing that it does get cold in the winter. Bismarck, in the center, is fairly typical in its January mean of 8.1 degrees and its July mean of 70.6 for an annual average of 41.2 degrees. The warming effect of the Chinook winds in winter is felt in the west and this more than makes up for the higher elevation, so that the western counties are several degrees warmer than the eastern.

Rainfall averages 21 inches in the southeast, ranging downward to 14 inches in the northwest. There is an early summer maximum, when it is most needed for crops, and a winter minimum, so that the snow accumulation is far less than states farther east. The prevailing low humidity makes both summer heat and winter cold much less oppressive than the temperatures would suggest, and visitors from the humid East are often pleasantly surprised to find that both seasons are more comfortable than what they are used to back home.

The rainfall is not always adequate throughout the state for crops and during this past summer scare stories began to appear in the national press about the Upper Plains. By August, however, enough rain had fallen to assure respectable grain crops in the eastern part of the state, and a good hay crop in the west where cattle are important. In fact, the railroads, were having some difficulty getting enough cars together to haul away the unexpectedly good harvest in many areas.

The state is actually the freest of drought of the main row of plains states southward to Texas, as its population distribution suggests. All the others have a marked thinning out of population density toward the west, but in North Dakota this is not the case, except to a limited extent in the southwest.

The lower rate of evaporation in North Dakota, as compared with states farther south, makes regular agriculture possible with 15 inches of rain, whereas 20 or even 25 might not be enough in the Southwest.

### 42 Million Acres of Farms

North Dakota always has been and will no doubt continue to be primarily an agricultural state, and is superbly equipped by nature for this role. No less than 93.4 per cent of the state's area is in farms or ranches, as compared with a national average of 60.8 per cent. About 0.4 per cent of the Nation's population accounts for 1.5 per

cent of the total value of agricultural products, including 2.1 per cent of the crop value.

The state is the leading producer of spring wheat and raises nearly all of the durum wheat so prized for macaroni. It ordinarily ranks second after Kansas for total wheat production — usually well over 100 million bushels and over a tenth of the national production. Ten counties produced over 4 million bushels in 1960 and only five produced less than a million bushels.

The state is even more important nationally for barley and rye, although the acreages and value of production are much less than for wheat. It accounts for between a sixth and a fourth of both crops in most years and vies for leadership with California for barley and with South Dakota for rye.

Although the state lies north of the Corn Belt proper, several southeastern counties are major corn producers, and the same is true for oats, for which North Dakota is usually the sixth largest producer.

Flaxseed is a state specialty and half the national crop normally is produced here. Major production comes from the east central and south central sections.

The Red River Valley has three other specialties — potatoes and sugar beets in the north and soy beans in the south, and is one of the most highly diversified areas in the country. Two other counties — Barnes (Valley City) and Stutsman (Jamestown) also rank among the first ten counties of the state in four or more crops.

Acreage and production of leading crops for 1960 is as follows:

Crop	Acreage harvested (000)	Production (000)
All wheat	6,440	127,500 (bu.)
(Durum Wheat)	(1,280)	( 26,880) (bu.)
Barley	3,268	80,066 (bu.)
Flaxseed	2,045	15,746 (bu.)
Wild Hay	2,006	1,805 (tons)
Oats	1,967	65,894 (bu.)
Tame hay	1,881	2,493 (tons)
Corn	1,328	31,872 (bu.)
Rye	303	6,666 (bu.)
Soy beans	176	2,288 (bu.)
Potatoes	112	14,560 (cwt.)
Sugar beets	42	564 (tons)

In 1959, farm income was \$578 million, derived mainly from the following crops and products, expressed in millions of dollars:

Wheat	202.3
Barley	53.8
Flaxseed	38.8
Potatoes	11.0
Oats	8.4
Sugar beets	4.9
Soy beans	3.6
Rye	3.1



Fly across the state looking for patterns and you will get some lulu's. When the grain is cut it is left in long windrows for the combines to thresh. The windrows may wind around like ruffles on a full skirt or march for miles in straight lines. Shelterbelts divide much of the state into checkerboards and provide cover for game as well as helping to hold the soil. Not shown are the bold light and dark stripes of the dry farming area, where alternate stripes are left fallow every year.



## NORTH DAKOTA

Cattle and calves .....	131.4
Cream and butter .....	28.8
Hogs .....	24.0
Milk .....	8.1
Eggs .....	8.0
Sheep and lambs .....	7.7
Turkeys .....	3.2

Although the great bulk of the state's agricultural production can be transported in raw form, there is increasing interest in local processing plants and in growing crops such as sugar beets that require local processing.

A rising share of the state's grain reaches the market in the form of high-grade beef and pork, and this sector of the economy is due for a still bigger jump as irrigation expands, since much of the irrigated acreage will be devoted to alfalfa.

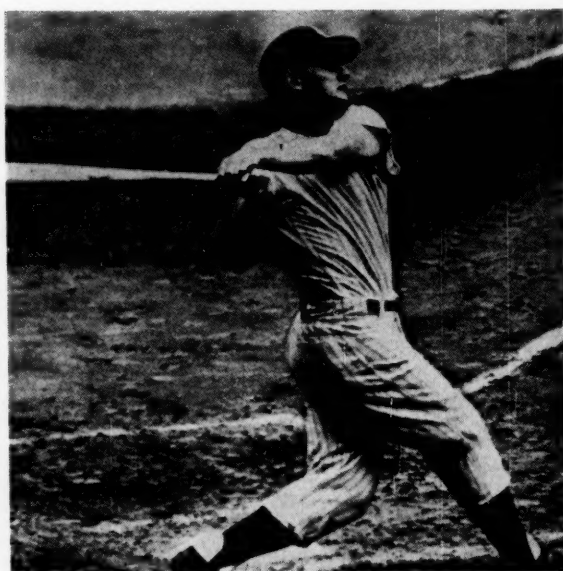
Other agricultural products suitable for processing within the state include the skimmed milk left over from butter, which is being used by new cheese plants, and wheat and flax straw. Northern Stramit has a plant at Devils Lake for processing wheat straw into a paperboard.

Among other possibilities suggested in a research study by Professors Alex. C. Burr and J. A. Ossorio were: flax crushing, safflower oil, oil-seed processing, mixed feeds, turkey processing and dry non-fat milk solids.

### Sturdy Breed

Settlement, other than fur trading posts and forts to control the Sioux and other Plains Indians, had to await the building of the Northern transcontinental railroads, which got underway in the 1870's and was completed in the 80's. Settlers came in with a rush in response to the good prices being received for Northern wheat, and by 1889 North Dakota was admitted along with South Dakota as the 39th and 40th states. By 1910, most of the land was taken up, and the population had reached 577,000, not far from the present total of 632,000.

Most of the settlers came from Northern states farther east or from Germany, Scandinavia, and parts of Russia inhabited by Germans. After a winter or two in a sod house, most families were able to put up a substantial house and out buildings. Farms were larger than in the East or the older parts of the Middle West — 320 acres was the most common size, but many were 640 acres or larger, especially west of the Missouri, which was mainly ranching country.



Until the baseball season is over, be sure to find out the time each day that the Yankees are playing. No point in calling North Dakota during a game, as everybody is busy keeping track of Roger Maris's home runs. Although he had the misfortune (according to Dakotans) to have been born in Minnesota, he spent most of his early life in North Dakota and played for Fargo-Moorhead in the Northern League.



One of the state's great surprises is the spectacularly beautiful International Peace Garden on the Canadian border near Dunseith in the Turtle Mountains. It commemorates nearly a century and a half of peace along the boundary, which forms the axis of the garden from upper left to lower right.



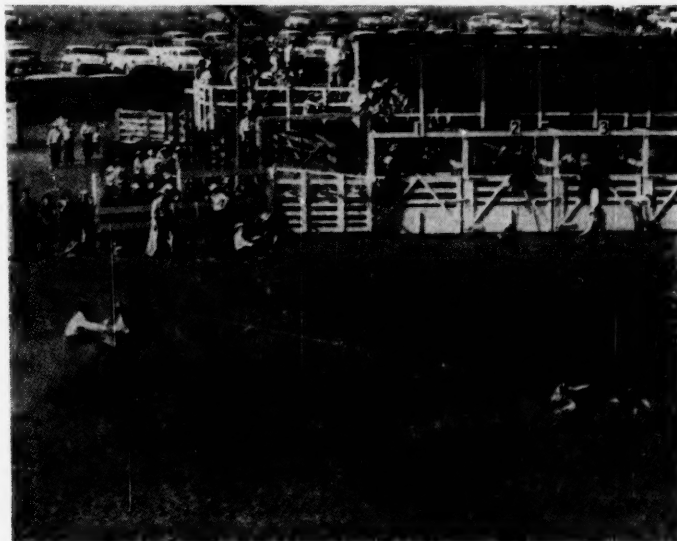


Fort Totten, established in 1867 to watch over the Sioux and to protect a pioneer trail, still has most of its buildings intact. The surrounding area south of Devils Lake is now the Fort Totten Indian Reservation, with 1,400 Sioux in residence.



Waterfowl on their way to and from breeding grounds in Canadian lakes cross the state in great flocks, and sloughs and ponds in the state produce up to four million ducks annually. Upland game birds such as pheasant and sharptail grouse are also abundant. Hunting deer and pronghorn antelope with bow and arrow is one of the state's more distinctive offerings to sportsmen.

North Dakota has its own little Wild West in the southeast, around Dickinson, Watford City and Bowman. The Dickinson Rodeo is a main event in the summer round of rodeos. Teddy Roosevelt left his brand over a good part of this country, and is still recalled in the annual production of "Old Four-Eyes" at Medora.



## NORTH DAKOTA

North Dakota has mementos of Lewis and Clark's expedition and various Indian fights but its favorite recollection of its past is of Theodore Roosevelt's sojourn in the southwestern part of the state — then still a territory — in the early '80's to recover his health. The early ranchers had some difficulty in translating his Harvardese into everyday language, but they soon discovered that he was no ordinary tenderfoot. In fact, he soon left them panting and proceeded to become a legendary figure in the magnificent Bad Lands country, where a play is given every summer to depict the exploits of "Old Four Eyes."

Other unexpected sights turn up in the state, one of the most notable being the Turtle Mountains. This area spilling over into Canada, while not exactly Alpine, offers beautiful wooded hills to belie the state's reputation for being flat and treeless, and has a number of much-visited lakes as well as an International Peace Garden that commemorates the undefended frontier with Canada and is advertised on the state's license plates.

Sportsmen are especially attracted by the waterfowl, as North Dakota is a major way station on the flyway from the Arctic to the Gulf.

Residents have a crack at all the usual sports in season, including water sports on Garrison Lake, and the nearness to Canada is reflected in the number of hockey and curling adherents.

Indoors, North Dakotans have a creditable, not to say formidable, schedule of civic and cultural activities to liven things up. The strong lacing of Germanic and Scandinavian blood is expressed in a strong musical bent, and local symphonies and choral groups put on performances that would be creditable to much larger communities. Theatrical groups are also active, especially in the colleges, and visiting artists are impressed with the discriminating audiences they attract.

Look back to ID's issue of September 1959 to the map of the United States two days following an imaginary atomic attack. You will notice that apart from a thin path down wind from the Minot Air Force Base, North Dakota is the center of the largest unaffected area in the country. In these days of quickening international tension, this is no small advantage. There are, to be sure, possible targets in Canada — chiefly in Alberta — that might modify this picture somewhat, but the fact remains that North Dakota offers an excellent chance of survival from a holocaust.

It has the added advantage of being all but

completely inaccessible to attack from atomic submarines — an advantage not shared by otherwise well dispersed areas in the South.

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### Labor: "Intelligent, Resourceful"

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Forty years ago the farmers, exercised over the large spread between what they received for their products and what the products ultimately sold for, set about to assert their independence of the grain and livestock markets in the Twin Cities and Chicago. Of the various state-owned and -operated enterprises set up at that time, only the Bank of North Dakota at Bismarck and the North Dakota Mill and Elevator at Grand Forks survive.

The gradual modification of grading and other procedures in the grain trade and adjustments in freight rates, along with the growing recognition of interdependence and mutual interest between the agricultural areas and the metropolitan centers, has changed the picture very greatly.

Meanwhile, the growth of industrial labor unions in other areas, but not in North Dakota, has produced a situation where the state now appears as one of the more conservative in the country, instead of the most radical. A case in point—work stoppages in three recent years amounted to 0.01, 0.02 and 0.04 per cent, respectively, of the estimated time worked, and even in the year with the highest figure — 1958 — only four states had a lower figure.

State officials estimate less than 20 per cent of non-farm employment is organized. The only plant we visited which had a union was a refinery at Mandan.

At Mandan we visited the refinery built some six years ago by Standard Oil of Indiana and now operated by American Oil Company. Dr. R. N. Giles, plant manager, readily answered our questions regarding experience with North Dakota workers.

The plant normally employs 250-300 workers, including some two dozen chemists, engineers, and professionals. Giles finished his education at Ohio State and came here from Chicago. His assistant, Pat Larson, came from Kansas City.

"We have found this to be an excellent source of intelligent and resourceful workers," Giles said, adding "we have had no difficulty in keeping personnel of all grades."

Since the plant was built, there has been one work stoppage due to union activity. A strike in



Lake Metigoshe in the Turtle Mountains could well be a favored Wisconsin resort area. Actually it is north of Bottineau near the border. The wooded area in the Turtle Mountains is the largest in the state and includes a good deal of commercial forest land.

A big employer in the state and the most massive building is the state-owned mill and elevator at Grand Forks. Started four decades ago, it improved the farmers' bargaining position with Eastern grain interests.



Grain elevators tower over cities and towns all over the state. This one in Jamestown was recently expanded to a capacity of a million bushels.



Dr. R. N. Giles, manager of the American Oil refinery at Mandan speaks highly of North Dakota labor. He reports a very low turnover also among scientific and professional personnel.



## NORTH DAKOTA

1958 over "management prerogatives" lasted 4 weeks.

At dinner we met with Gail Hernett, President, and Lyle Swigart, Executive Director, Greater North Dakota Association. This is the state chamber of commerce, with 5300 members throughout the state.

We found that private enterprise has some staunch supporters here. Hernett is mayor of his town, Ashley, and represents his district in the state Senate where he is Chairman of the Business and Industry Committee.

In his tenure, Senator Hernett says he has seen no sign whatever of anti-business activity. On the other hand the legislature has frequently acted to promote industry.

North Dakota's Right to Work Law has not been seriously challenged. Recently, the legislature enacted a reapportionment bill, something almost unheard of among state assemblies.

State taxes are primarily on the consumer as the following table shows:

State Revenue Collections for the Year ending June 30, 1960 (in thousands of dollars).	
Retail sales tax .....	14,377
Motor vehicle registration .....	8,385
Cigarette tax .....	3,497
County highway aid gas tax .....	1,868
Liquor tax .....	1,853
Beer tax .....	1,157
Oleomargarine tax .....	280
Income tax .....	5,996
Oil and gas production tax .....	2,502
Use tax .....	1,259
Total .....	41,174

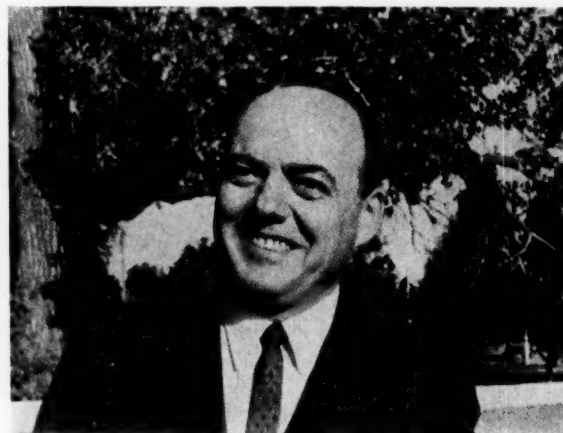
The corporate income tax ranges from 3 per cent for the first \$3,000 of business income derived from the state to 6 per cent for all over \$15,000. The personal income tax rate is 1 per cent for the first \$3,000 of net income and increases to 11 per cent for all over \$15,000 with Federal tax deductible. Exemptions are \$1,500 for a married couple and \$600 for each dependent.

Local property taxes exempt goods moving in interstate commerce through the state, and goods brought to the state for storage or processing for ultimate disposal outside the state. Assessments generally range at between 25 and 40 per cent of "true and full value." Local, county and state boards of tax equalization iron out inequalities.

The sales tax rate is 2 per cent and the unemployment insurance tax ranges from 3.7 per cent down to 0.33 per cent, depending on experience.



Gail Hernett, a banker from Ashley, is current president of the Greater North Dakota Association which plays the role of a state-wide chamber of commerce. He is also a veteran member of the state senate and a key man in legislation promoting better business climate.



Lyle Swigart, is the Executive Director of the Greater North Dakota Association.

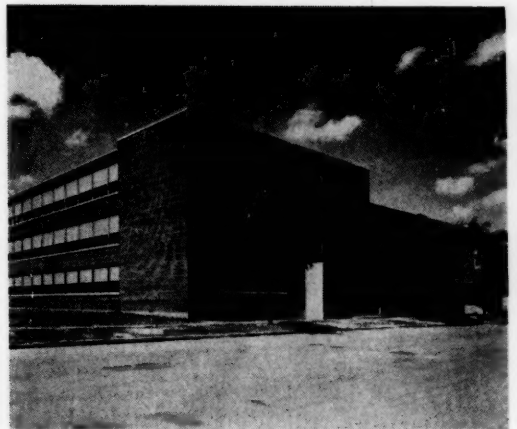




Largest and oldest of the state's colleges is the University of North Dakota at Grand Forks. The building at the right is the old library.

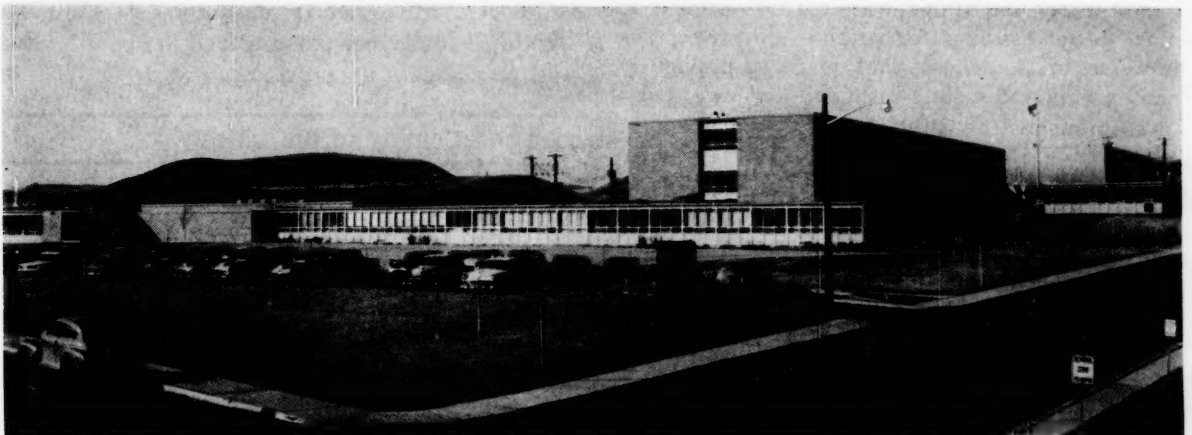


North Dakota State University at Fargo is the land grant college and has been building at the rate of \$1 million a year for several years; the main campus now represents an investment of \$20 million. A large Federal research laboratory is scheduled for early construction.



Jamestown has recently added a wing to its Senior High School.

New schools have been built all over the state. Mandan's Senior High School is a recent example.



## People Leaving The Farms...

Largest North Dakota asset **in being** is the crop of youngsters leaving school every year and looking for new employment opportunities not available in the agricultural sector, which is continuing to contract in employment while rising in efficiency and overall yield.

North Dakota schools have extremely high standards and the lack of any large minority group with low educational attainments helps boost the state all the way to the top in such important indices as the Selective Service records of rejections for physical defects and inadequate schooling. Only 20.6 per cent of North Dakota registrants failed to make the grade for physical reasons, as opposed to a national average of 37.0 per cent, while rejections on the basis of the written examination were 1.1 per cent as compared with a national average of 2.0 per cent.

Contrary to popular belief, North Dakotans like to come home after they've "seen Paree" or Chicago or the West Coast, and recent surveys show a large percentage of recent labor force entrants who want to stay in or return to North Dakota, rather than seek jobs elsewhere.

The small Indian minority is mostly centered in four reservations — Turtle Mountain for the Chippewa, Fort Totten and Standing Rock for the Sioux and Fort Berthold for the Mandan, Arikara and Gros Ventre. Under the guidance of the Bureau of Indian Affairs, special facilities are available for training the Indians for jobs where their inherited skills can pay off for modern industry.

The outstanding example of the success of this program is the Turtle Mountain Ordnance Plant at Rolla, where the Bulova Watch Company employs nearly 100 Chippewas, mostly women, to make jewel bearings for defense industries. The processes are so delicate that the Swiss previously had an almost complete monopoly on jewel bearings, an unhealthy situation for us in event of war.

North Dakota is not satisfied with its present level of well-being, even though it has one of the most prosperous agriculture-based economies in the world. The state government, local governments and groups of local citizens are mounting a broad-gauged program to stimulate local industrial growth and attract the interest of out-of-state firms to opportunities in the state.

The state's role, under the leadership of Governor William L. Guy and the Economic Development Commission, of which Lawrence A. Schneider is the Director, is to search out likely fields in which private and community action can be most effective and to assemble and publish information on the state's resources. State guidance to communities on how to put their best foot forward is embodied in the Community Betterment Program, which stresses community evaluation and projects to make towns and cities more attractive to industry.

Apart from betterment programs, community action centers on raising funds for buying sites, putting up buildings or equity financing. There are nearly 40 industrial development corporations, many of which have already raised money. Several of the plants recently opened have taken advantage of the financing aid available from this source.

Since 1955, it has been possible for communities to issue bonds to finance the development of industrial property for lease or sale to industries. One of Fargo's new plants — Branick Manufacturing — was built on this basis.

Development corporations have been established in the following cities and towns:

Adams	Fargo	Linton	Park River
Beach	Fessenden	Lisbon	Parshall
Bismarck	Garrison	Mandan	Rugby
Carrington	Grafton	Mayville	Steele
Cooperstown	Grand Forks	Minot	Strasburg
Crystal	Hatton	Mohall	Valley City
Devils Lake	Hillsboro	New England	Wahpeton
Dickinson	Jamestown	New Rockford	Walhalla
Drayton	Kindred	Northwood	Williston
Edmore	Lakota	Oakes	

Several years ago Bismarck Industries, Inc. sold \$110,000 stock and built a plant for Kirschmann Manufacturing Company, makers of fertilizer spreaders and other farm equipment employing up to 50 employees. They moved in about 3 years ago on a lease with option to buy.

## ...and Coming to the Cities

All of the big four cities — Fargo, Grand Forks, Minot and Bismarck — showed greater numerical gains in the 1950's than they registered in the '40's. So did Jamestown, Williston and Mandan, which complete the list of cities over 10,000 in the last census — Dickinson is now unofficially over that mark as well, having reached 9,971 in the Census.



Key man in North Dakota's recent development upsurge is, without doubt, Larry Schneider the executive director of the North Dakota Economic Development Commission.



Assistant Director of the North Dakota Economic Development Commission is Robert Huey, shown here examining a display in the agency's offices in the state capitol building.



Curtis Olson, a retailer, is at 37 the youngest member of the board governing the North Dakota development agency. He has been instrumental in the success of a new shopping center and is a strong advocate of research.



Industrial sites are plentiful and land prices are low in comparison with Eastern standards, according to real estate man Bert Fevold, shown here scanning an area on the Missouri River west of Bismarck. Prices of \$125 per acre are not unusual.



Art Leno, manager of the Chamber of Commerce in Bismarck, has good reason to smile—having launched a major new industry during ID's staff visit.



Happily checking on construction of Fargo's new Chamber of Commerce building is Executive Secretary Vic DeForest. Bulldozers were grading the site in the downtown business area during the visit of ID's editor.

## NORTH DAKOTA

Part of this growth was a continuation of past trends, and part of it was due to new developments, such as oil in Williston, air bases in Grand Forks and Minot and an oil refinery in Mandan.

Present populations of the cities is as follows:

Fargo .....	46,662
Grand Forks .....	34,451
Minot .....	30,604
Bismarck .....	27,670
Jamestown .....	15,163
Williston .....	11,866
Mandan .....	10,525
Dickinson .....	9,971

Greater Fargo includes Moorhead (22,934) and Dilworth (2,146) in Minnesota and South West Fargo (3,328) for a total of 75,070. For comparability, East Grand Forks (6,998) would boost its neighbor to 41,449 and the combined population of Bismarck and Mandan is 38,195.

Greater Fargo retains its position as the largest city and the leading wholesale center between Minneapolis and Spokane. As the closest of the major cities to all three of the navigable waterways — the St. Lawrence Seaway, the upper Mississippi and the Missouri up to Sioux City — Fargo stands to profit greatly from any changes in the freight rate structure brought about by increased use of water transportation.

Fargo is the state's leading industrial center, with more than 70 small and medium-sized plants, and it also has sales offices and warehouses of many large out-of-state corporations. Four of the state's chief banks are in Fargo, and its ties with the rich agricultural area surrounding it are strengthened by the presence of the North Dakota Agricultural College and Experiment Station, where much research on processing food products is carried out.

Grand Forks is the nearest of the state's larger cities to a metropolitan center, being only 150 miles from Winnipeg. It is to the lower Red River valley what Fargo is the upper, and is the seat of a large Air Force base, the University of North Dakota and the Bureau of Mines' Lignite Research Laboratory operated in conjunction with the University.

Bismarck, together with Mandan, commands the course of the Missouri River through the state and is the main service point for the Garrison Dam, 40 miles upstream. As the state capital, the seat of the state's largest bank and a main aviation center, Bismarck is also a leading industrial center by virtue of the Standard Oil of Indiana refinery at Mandan.



Gracing Williston's main street is Yvonne Hologate, Chamber of Commerce manager.

Long identified with petroleum marketing in North Dakota, Dick Coughlin is Vice President of Westland Oil Company. Several years ago he bought a small refinery at Williston and is now engaged in a major expansion program.







Current president of the Williston Chamber is Charles L. Scofield who operates station KEYZ.



Enthusiastic spokesmen for North Dakota include (left) Alec Rawitscher, president of the Williston City Council and (right) Arley R. Bjella, attorney prominent in state political affairs.

### Community Development: ID VIEWS TYPICAL TEAM IN ACTION

In order to observe the working of a typical North Dakota community development team, ID's editor flew to Williston in the Northwest part of the state. He arrived unannounced at 11:00 a.m. and within minutes the alert chamber manager had contacted key officials and arranged for a luncheon session. Gathered around one table were top city and county officials, an attorney, utility executives, and spokesmen for the business community. Questions were answered promptly and forthrightly. Team members were equally quick to acknowledge needs and shortcomings — indicating a healthy outlook on future undertakings.



Joining forces to promote the Williston area are (left to right) Sig Forseth, manager of the Williams Electric Coop; S. R. Siverson, County Commissioner; and Joe Vranish, area manager for Montana-Dakota Utilities Company.

## NORTH DAKOTA

Once reached by the old river stern-wheelers, Bismarck stands to be a river port again if plans are ever formulated to link up the long expanses of reservoirs in South Dakota into an extension of navigation on the Missouri. More immediately, it can draw on Garrison Dam power and is near the proposed sites of a large new lignite-burning thermal plant.

Minot has a vast trade zone that includes a good part of the proposed irrigation area to result from the Garrison Diversion project. A major rail and wholesale center, it is an important control point of the Strategic Air Command. Like Bismarck, it stands to gain from increased interest in lignite, which is already mined in quantity at nearby points.

That there are good opportunities for market-oriented enterprises in North Dakota is evidenced by the success of Shirley-Onstad, Inc., wholesale plumbing and heating supplies distributors in Fargo. Begun after World War II, this locally-owned and locally-managed firm today serves a huge territory in Minnesota, North Dakota, and Montana from a modern warehouse facility in Fargo's newest industrial area.

Showing ID's editor through the spic-and-span 40,000-square-foot plant, Vice President Jim Onstad showed how shipments are made into a market area 750 miles wide — from Alexandria, Minnesota on the East to Havre, Montana, on the West.

Onstad said about half of incoming shipments were by truck, and about three-fourths of outgoing goods went by highway. Queried about the effect of winter weather on movement of goods, Onstad said this was a negligible factor. "Last year our traffic was interrupted two days by weather — first time in several years," he said.

An enthusiastic proponent of development of North Dakota by North Dakotans, Onstad detailed some of the advantages of living here and raising a family. "Everybody knows everybody else" and business is conducted on a personal basis, Onstad explained. "I have a friend in Cando who calls me as soon as the geese start coming through and I take off to go hunting."

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### A Million Irrigated Acres?

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Two long-term factors are strongly on the side of the North Dakota farmer. One is the mounting population both of this country and of Free World areas that customarily buy some of the state's wheat. The other is the vast quantity of

water now available in the Garrison Reservoir.

Even though there is currently a large surplus of wheat stored in this country which cannot easily be disposed of because of low purchasing power abroad and the competition of other wheat-producing areas, the world-wide increase in population and rising standards of consumption in many foreign countries make for an ultimate prospect of an assured market for this country's surplus.

The Garrison Diversion Unit is the ambitious long-term proposal to irrigate upwards of a million acres in North Dakota and a small part of South Dakota by diversion of Missouri River water from Garrison Reservoir to the drainage basins of the Souris, the upper James, and the Sheyenne (a major tributary of the Red River).

In its original form, the proposal was authorized by Congress in 1944 as part of the Pick-Sloan Plan, but reauthorization is necessary since the present plan envisages use of water from the Garrison Reservoir rather than the Fort Peck Reservoir in Montana. Since North Dakota lost 500,000 acres of farm land to the Garrison and Oahe reservoirs, and since the benefits presently realized from these reservoirs are largely flood control for lower basin states, North Dakota has an excellent case for reauthorization.

The plan, which would be executed over a period of 50 or 60 years, involves separation of the eastern end of the Garrison Reservoir and pumping to maintain it at an elevation of 1850 — the spillway of Garrison Dam is at 1825 feet — and digging a gravity-flow canal 73 miles eastward to a reservoir to be built in northeastern Sheridan County. This canal will take advantage of the very low divide between the Missouri and the headwaters of the Sheyenne, and other canals will lead from this new reservoir across other low divides to the upper James and the middle course of the Souris.

The largest single area to be irrigated is in the Souris valley in McHenry and Bottineau Counties, but sizeable areas can also be irrigated in the Sheyenne and James valleys and near Devils Lake, which will be regenerated from its present dwindled size and become fresh.

The initial diversion of water is limited by the pumping plant's proposed capacity of 2,950 cubic feet per second, and the ultimate capacity would be 8,850 cubic feet per second. The average discharge of the Missouri from a point a little below Garrison Dam was 25,790 cubic feet per second over a period of five years.

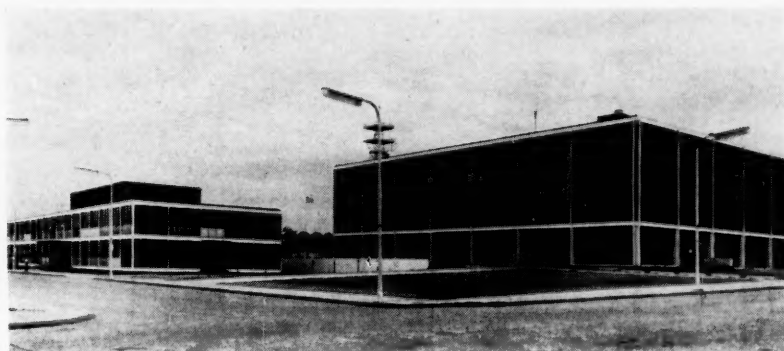


Personable Jim Onstad has shown by his own example that new enterprises can flourish in North Dakota. Headquartered in a modern new building, his wholesale plumbing and heating firm serves a territory extending across 750 miles.

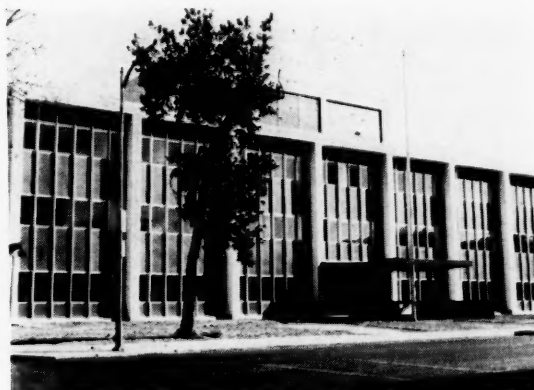
Downtown Fargo is getting its share of new buildings. The Gate City is so called in recognition of its position across from Minnesota, where a third of the population of Metropolitan Fargo live. A good share of west central Minnesota is included in Fargo's trade area.



Fargo's Civic Center is well advanced, with a new auditorium and city hall finished and a library and cultural center scheduled for the far end of a two-block site.



Devils Lake has the sparkling new Ramsey County Courthouse, with air conditioning and elevators. No more spittoons and wooden benches worn shiny.



## NORTH DAKOTA

The experience of all the larger irrigation projects suggests that economic effects will be far-reaching. Minot and Valley City are the closest cities to the areas to be irrigated and many small towns in the area can expect a substantial growth, but the over-all impact is likely to be state-wide.

Rather than wheat and other crops now being stored as surplus, the irrigated area would in all likelihood be devoted mostly to alfalfa and silage corn and would give rise to an expansion in the already important beef cattle feeding industry, while surrounding non-irrigated land would continue to grow grain crops.

### Every County Has A Railroad

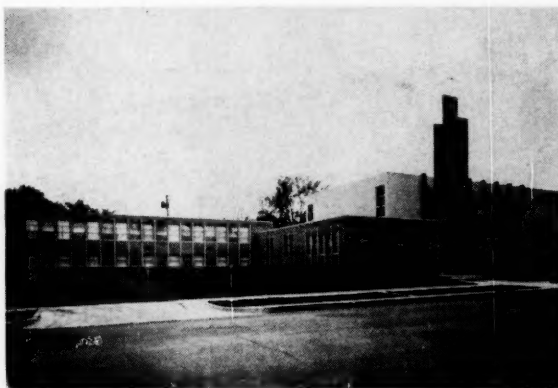
The rail pattern of North Dakota was devised to get the state's wheat to world markets via Duluth and the Twin Cities and is notably dense for a western state — in fact, the densest in the country per thousand inhabitants.

The three leading lines in terms of mileage are the Northern Pacific, the Great Northern and the Soo Line (Minneapolis, St. Paul and Sault Ste. Marie). The first two run completely across the Northwestern states from the Twin Cities and Duluth to Seattle and Portland, while the Soo Line extends from Chicago to Montana and makes a connection at Portal, North Dakota with the Canadian Pacific to provide through service to Vancouver.

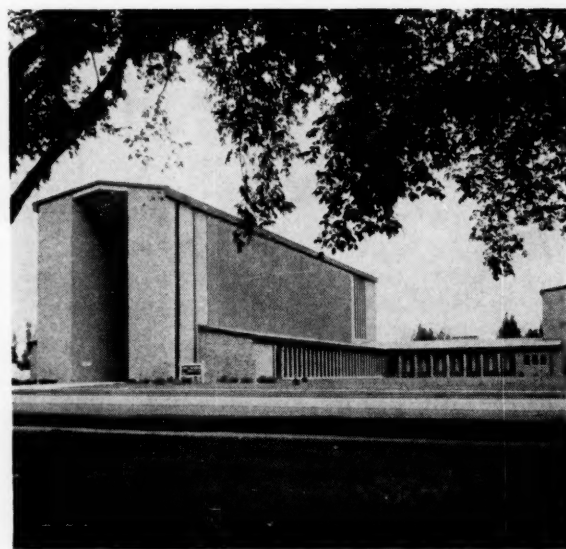
The Northern Pacific's main line is the main stem of the southern part of the state, from Fargo through Jamestown, Bismarck and Dickinson. Most of its branches are in the southern half of the state, but one enters the state at Grand Forks and continues northward a short distance into Manitoba. The main line divides within Minnesota to reach either Duluth or the Twin Cities.

The Great Northern has a main line across the northern half of the state from Grand Forks to Devils Lake, Minot and Williston and an important diagonal from Fargo to Minot. The northern line is aimed at Duluth and the Fargo diagonal at the Twin Cities, but the two are interconnected just inside the Minnesota line. Branches of the Great Northern are especially dense in the northeast quarter of the state, and the total mileage of 1,975 is the largest in North Dakota.

Merger proposals would unite the Northern Pacific and the Great Northern with the Burlington to give direct access to Chicago and incidentally to link up with St. Louis, Denver and Texas. On the Pacific Coast, the Spokane, Portland and Seat-

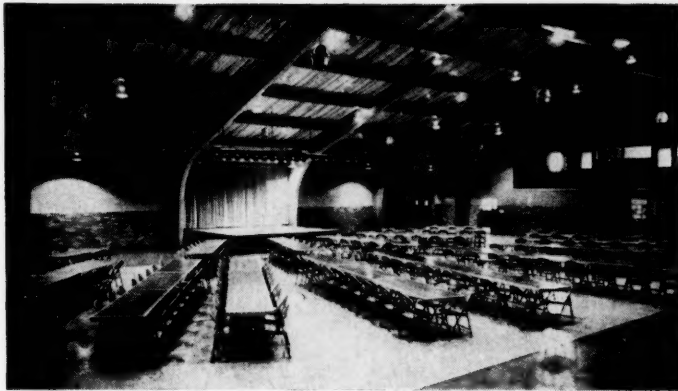


Bismarck's McCabe Methodist Church finds a new expression of spiritual aims in the simple lines of its tiered brick tower.

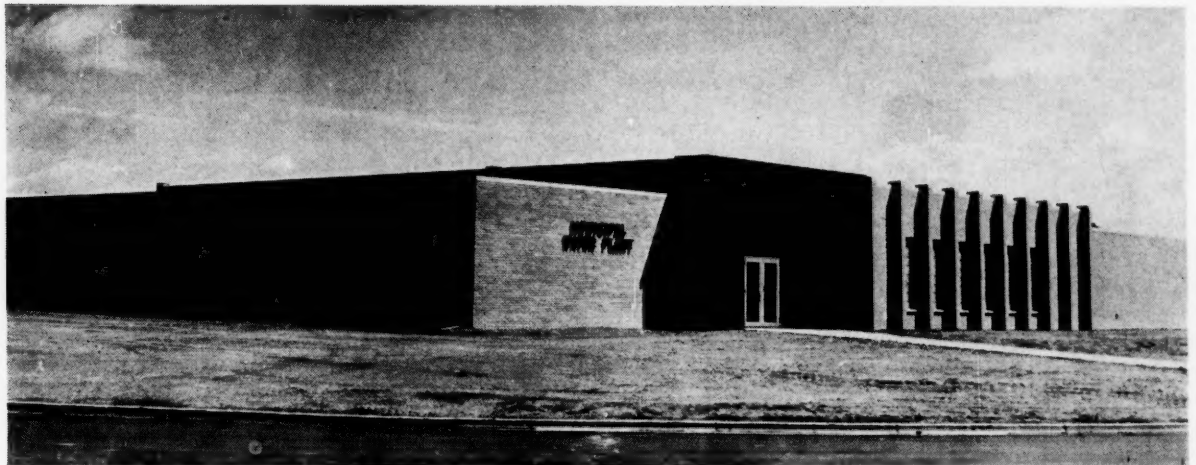


The soaring window flanked by massive towers is a modern rephrasing of a traditional theme in the facade of the First Lutheran Church at Williston.





Williston has a new National Guard Armory . . .



Jamestown has a new water plant with treating capacity of 6 million gallons a day, and . . .



Grand Forks has a new hospital — St. Michaels

## NORTH DAKOTA

tle would be included in the system.

The Soo Line has a line serving most of the northern tier of counties and a diagonal running through Valley City and Minot, as well as lines serving some of the southern counties and the Missouri Valley from Bismarck upward past the Garrison Dam.

One other transcontinental line — the Milwaukee — cuts across the southwestern corner of the state and several branches from the main line farther east in South Dakota reach up into North Dakota; one of these reaches Fargo.

Two other railroads have trackage within the state. The Chicago and Northwestern has a branch to Oakes, in the southeast, which connects with the Northern Pacific and the Soo Line. A small independent line, the Midland Continental, running north and south of Jamestown, connects a Milwaukee branch with the Northern Pacific and the Soo Line.

The two Interstate Highways that will cross North Dakota are Route 94, which will parallel and in some places replace east-west Federal Route 10 through Fargo, Jamestown, Bismarck and Dickinson, and north-south Route 29 along existing Federal 81 on the eastern border.

The sweeping four-lane expanse of limited-access Route 94 already covers 145 of the 196 miles between Fargo and Bismarck, with several breaks. The gap east of Valley City is now under construction. Construction is also complete on the northern 35 miles of Route 29, and it will connect with a high-speed Canadian highway right into Winnipeg.

The other main highways are Federal Route 2 through Grand Forks and Minot and a major diagonal, Federal 52, from Jamestown to Minot and Portal, where it connects with a major Canadian highway to Regina. Paved state and county highways form an elaborate network over the state, mostly on north-south and east-west alignments.

Trucking companies with headquarters out of the state as far afield as Oregon and Texas have terminals in North Dakota; there are 25 of these and another 16 interstate carriers with North Dakota bases — four of them at Fargo. The second-morning delivery circle includes Milwaukee, Des Moines, Lincoln, Cheyenne and eastern Idaho, while the third-morning delivery service extends to Cleveland, Cincinnati, Joplin, Wichita, Pueblo, Pendleton and Spokane.

Airline service is provided by Northwest Orient to Fargo, Jamestown, Bismarck-Mandan and

Grand Forks; by North Central to Fargo, Bismarck-Mandan, Grand Forks, Devils Lake and Minot; and by Frontier westward from Bismarck-Mandan and Minot to Dickinson and Williston. Bismarck-Mandan, reached by all three and served on one flight by Lockheed Electras, comes close to being the aviation center of the state.

One other city — Valley City — also has an airport with paved runways and runway lighting, and there are 104 secondary municipal and commercial airports suitable for executive aircraft.

Grand Forks Air Force Base and Minot Air Force Base are partly a reflection of the high percentage of good flying weather in the state — ceilings of 1,000 feet or more and visibility of 3 miles or more prevail 93 per cent of the time — and also a recognition of the strategic importance of the area in a period when an attack might as easily come in over the polar wastes and Canadian forests as across the oceans.

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### Three Big Power Companies

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Urban North Dakota is served mostly by three large privately owned power companies, while most rural areas are served by 24 cooperatives. Valley City, Grafton and a few other towns have municipal systems. All systems are interconnected in a grid covering the whole state and linked to facilities in nearby states.

Until the completion of the Garrison Dam, the generating capacity was almost entirely in thermal plants, many of them burning lignite. At present the 400,000 kilowatts of installed capacity at Garrison Dam provides more than all existing thermal plants, but large thermal units are being considered by both privately and publicly owned groups.

Northern States Power, with headquarters in Minneapolis, offers service in the Fargo and Grand Forks area in the east and in a separate area including Minot in the west; each of these cities is a divisional headquarters.

Next west is Otter Tail Power, which has its main offices in Fergus Falls, Minnesota and divisional offices in Jamestown and Devils Lake. Its territory includes a belt of towns extending from Wahpeton to Oakes in the south, Devils Lake to Garrison in the center, and Walhalla to Bottineau in the north.

The western third of the state and a south central strip is served by Montana-Dakota Utilities, with its headquarters in Minneapolis and



At the rate things have been going, North Dakota could well lead the field in finishing its share of the Interstate Highway System. The 196-mile Fargo-Bismarck leg of Route 94 is already three-fourths complete. This is the Jamestown interchange with the city in the distance.

Harry Silk, who manages the division of Northern States Power serving the Minot, Grand Forks and Fargo areas, reports a 9 percent increase in load for the first half of 1961 over the same period of 1960 — reflecting substantial growth in industrial and other development...



Focal point of Minot's important railroad activity is Great Northern's \$6.5 million classification yard, where buttons are pushed to head thousands of tons of freight a day to the right destination.

The Heskett steam plant of Montana-Dakota Utilities at Mandan, which burns lignite by a wholly owned subsidiary, is on its way to big-time status. A 66,000-kilowatt addition more than trebling the plant's capacity is scheduled for completion in 1963.



## NORTH DAKOTA

division offices in Bismarck, Dickinson, Kenmare and Williston.

The largest thermal plant in the state at present is the Minnkota Power Cooperative's Grand Forks plant of 47,000 kilowatts, but the Mandan plant of Montana-Dakota Utilities is being expanded from 25,000 to 91,000 kilowatts by an addition to be completed by the fall of 1963.

A recent study by Burns and Roe, a New York engineering firm, estimates that a mine-mouth thermal plant using lignite and consisting of a single unit of 200,000-kilowatt capacity and using cooling towers would have costs ranging from 2.652 to 4.525 mills per kilowatt hour, depending on the method of financing. Heavy power users please note!

Natural gas is supplied to much of the western half of the state, including the Minot, Bismarck, Williston and Dickinson areas, by Montana-Dakota Utilities. The supply is piped in from the company's own properties in Montana and Wyoming as well as fields in North Dakota.

Fargo and Grand Forks are supplied by Northern States Power, which draws Canadian gas from the Midwestern Gas Transmission pipe line.

### Who Knows What?

Since 1957, when the Economic Development Commission came into being, Larry Schneider and his staff have put together a great many facts about the state as a whole and have made contacts with scores of local groups. Studies sponsored by the Commission can be used as spade work needed in starting up many types of industry.

Voice of the state's business leaders is the Greater North Dakota Association in Fargo; Lyle Swigart is Executive Vice President.

Regional data can be obtained from the railroads and power companies, either from their Minnesota and Chicago headquarters or from their local North Dakota offices. For example, Great Northern has E. M. Gregory at Fargo and other officers at Grand Forks, Minot and Williston; Northern Pacific has representatives at Fargo and Grand Forks and the Soo Line at Bismarck and Minot.

Local planning commissions, notably at Fargo and Bismarck, have been busy zoning land for industry and working for extensions of utilities to potential sites. Chambers of commerce, often tied in with the local development corporations listed on an earlier page, make a point of keeping up-to-date local information.

### References on North Dakota Opportunities

- North Dakota Economic Development Commission**, State Capitol, Bismarck.  
Directory of North Dakota Manufacturers, 1961, 101 pp., \$3.00.  
Land of Opportunity - North Dakota Industrial Location Facts, 1960, 112 pp.  
Industrial Opportunities in North Dakota through Lignite and Low-cost Power, 1959, 25 pp.  
Building Site and Location, 1959, 16 pp.  
North Dakota Growth Indicators, 1960, 20 pp., maps.  
Factors for Considering Sugar Beet Processing in North Dakota, 1961, 43 pp.  
**Burns and Roe, Inc.**, 160 West Broadway, New York 13, New York.  
1959 North Dakota Power Cost Study (prepared for the North Dakota Economic Development Commission), 31 pp., with drawings.  
**North Dakota Agricultural College**, Agricultural Experiment Station, Department of Agricultural Economics, Grand Forks.  
Research on Industrial Market Potentials for Selected North Dakota Agricultural Commodities, 1959, 67 pp. with 100 pp. of appendices.  
The North Dakota Economy - Factors Related to Economic Development (Bulletin No. 428), 1960, 32 pp.  
Distribution Patterns for Pork, 1961, 32 pp. (similar pamphlets on eggs, dressed poultry, other produce).  
**State Water Conservation Commission**, Bismarck.  
Water and Power Resources Development Plan, Map showing irrigated and irrigable land and proposed irrigation canals, also railroads and power lines.  
**Greater North Dakota Association**, 514½ First Avenue, N., Fargo.  
North Dakotan, published monthly, July 1961 issue, 18 pp.  
**Arthur D. Little, Inc.**, 30 Memorial Drive, Cambridge 42, Massachusetts.  
Summary of Industrial Opportunities of North Dakota and Adjoining Areas, 1955, 28 pp. The report summarized findings of several other reports covering the use of North Dakota lignite in processing alumina, iron ore, fertilizer materials and other chemicals.  
**North Dakota Forest Industries Committee**, Box 238, Bismarck, North Dakota.  
North Dakota Forest Facts, 1957-58 edition, 11 pp.  
Community brochures or assemblages of information from Bismarck, Devils Lake, Fargo, Grand Forks, Jamestown, Minot, Rolla, Walhalla and Williston.

### What's Ahead

Two main lines of development are already going full blast in the state. One is making market-oriented items such as food products, construction materials and adaptations of standard agricultural equipment. The other is processing local raw materials a stage further before shipping them to distant markets.

Both of these lines of development have plenty of scope. The rapidly growing urban population and the high per capita buying power can be counted on to boost the market-oriented lines, while only a small proportion of the state's raw produce is processed locally.

Once the next round of big increases in plant capacity of heavy power-using industries gets underway, look for North Dakota's lignite to come into its own. Studies already done show real opportunities for aluminum and a number of chemicals, and future studies will undoubtedly add to the list.

Meanwhile, the full effect of the St. Lawrence Seaway on freight rates in the area is not yet clear, and could well tip the scales in favor of North Dakota for many types of business.

Whoever comes to North Dakota or starts up there is assured of a prime labor source and a welcome reception from the State Government and community groups. Go and see for yourself.

This reference report on industrial location factors in North Dakota was prepared under the auspices of the North Dakota Economic Development Commission. Reprints may be obtained from Lawrence A. Schneider, Director, North Dakota Economic Development Commission, State Capitol, Bismarck, North Dakota.





# MANUFACTURERS RECORD

THE INTERNATIONAL SUMMARY OF PLANT LOCATION NEWS

ESTABLISHED 1882 VOLUME 130 NUMBER 10

By Frank H. Tarpley

**METAL PROCESSING** leads in new plant developments this month, not only in the United States but over the world.

Metal processing, by way of manufacture, fabrication or extrusions, was reported from almost every section of the country and absorbed by far the bulk of capital investment.

Steel and aluminum are the two most outstanding in these reports.

**CORDOBA, ARGENTINE.** Argentina and West Germany combine for a joint steel venture at Cordoba. Plans were announced despite the world tension existing over West Germany and West Berlin.

The steel plant, with an investment of over \$12 million, will manufacture steel for automotive, railway, tractor, machine tool, and petroleum industries.

A German firm will provide technical administration until Argentine specialists can be trained.

**WAUNA, OREGON.** Aluminum is the word at Wauna as plans go ahead for Cerro Corp. of New York to construct a \$35 million aluminum manufacturing plant there. The company has taken an option on 1,030 acres of land and signed a contract with Bonneville Power Administration for the needed electrical power.

The huge one-pot line plant will provide about 4000 jobs directly and 800 indirectly.

**HONOLULU.** Hawaii will soon have its first aluminum extrusion plant. The plant, to cost \$1 million, will enable factories to manufacture aluminum furniture, office equipment and other items in Hawaii, rather than importing them as in the past.

The Hawaii Aluminum Co. will turn out architectural shapes in alu-

minum. Michel A. Picard, executive vice president and general manager, said the operation will stimulate many other types of business for Hawaii. Construction is now underway and the facility should be in operation by October.

The output the first year is expected to represent about \$4 million in sales, and add several million dollars to the economy of the Islands.

**RAVENNA, OHIO.** Ravenna is the recipient of a \$10 million plant that will manufacture asbestos-cement pressure pipe. The decision to locate there brought to fulfillment a five-year effort on the part of the Area Development Committee (ADC) to bring a Flintkote plant to its vicinity.

The Flintkote plant to have 185,000 sq. ft. of floor space and employ 150 people, will be built in an industrial park owned by the Pennsylvania Railroad.

The company, which has home offices in New York, decided on the Ravenna site mainly because of the abundant supply of raw water available. About two million gallons of water a day is necessary for Flintkote's processing and testing.

In addition to the main manufacturing building, the development will include a series of steam curing units, a silica-grinding plant and an office building.

The following is a summary of major industrial plant locations in the United States, Canada and overseas as reported to **INDUSTRIAL DEVELOPMENT** during the month of July, 1961, by industries and industrial development organizations.

Each new plant meets one of the following minimum requirements: 10,000 square feet of floor space, \$100,000 building cost, 25 or more employees (warehousing facilities must meet one of the latter two requirements). Number of employees is indicated by the code: A (under 25); B (25-99); C (100-249); D (250-999); E (1,000 plus).

## ALABAMA

**Anniston** — Harrison Sheet Steel; metal office furniture. \$475,000. (C).

**Birmingham** — Duball-Bibb Co.; publications. \$100,000. (A).

**Birmingham** — Electronic Processors, Inc.; computer processing center. Oper. date: Sept. 1, 1961. \$350,000.

**Birmingham** — Empire Seafood Co., Inc.; Frank Madonia, Sr. Pres.; processing and wholesale seafood distribution. In oper. 13,000 sq. ft. \$300,000.

**Birmingham** — Genuine Parts Co.; store, office, warehouse facility and machine shop.

**Birmingham** — Plastic-Clad Corp., Darrell Proctor, Head; plastic clad doors, counters, tables. 10,000 sq. ft. \$100,000. (B).

**Birmingham** — Washer & Refrigeration Supply Co., Inc.; appliance parts distributors (new warehouse) \$125,000.

**Cullman** — Alabama Box Co., J. C. Ginter, Pres.; set-up boxes. 200,000 sq. ft. \$250,000. (B).

**Greenville** — Alabama Power Co.; new substation. \$110,704.

**Huntsville** — Marshall Space Flight Center; laboratory and office facilities. 227,000 sq. ft. \$4 million. (E).

**Irondale** — Bush Mfg. Co.; machine tools. \$50,000. (B).

**Leeds** — Plantation Patterns; office furniture. \$250,000. (B).

**Luverne** — Smith Mining Co.; brown iron ore. \$200,000. (B).

**Montgomery** — Buchanan Lumber Co.; lumber. \$500,000. (B).

**Tuscomba** — Southern Industrial Laundry; laundry facility, uniform rentals. \$15,000 sq. ft. \$250,000. (B).

## NEW PLANTS

**Windfield** — Windfield Mfg. Co., Milton Weinstein, Head; work clothing, sportswear. (C).

### ALASKA

No Plants Reported.

### ARIZONA

**Tucson** — Postcraft Co., Frank Roseman, Gen. Mgr. and Pres.; plastic bags. (B).

### ARKANSAS

No Plants Reported.

### CALIFORNIA

**Chino** — California Brass Manufacturing Co., Chino Ave. & First St.; brass and bronze valves and fittings for steam, air, oil, and gas lines. (B).

**Copperopolis** — Calaveras Co., Funk Hill; asbestos mill. Oper. date: March 1962. \$5 million. (C).

**Dominiquez** — Stauffe Chemical Co.; captive chlorine plant. Comp. date; third quarter 1962. \$ Multi-million.

**El Monte** — Space-General Corp., Dan A. Kimball, Pres. (Div. Aerojet-General); space program facility. 147,000 sq. ft. (E).

**Fresno** — Mission Linen Supply, G. B. Page, Pres.; industrial laundry plant. Completion date: Aug. 1961. 18,000 sq. ft. \$150,000. (B).

**Fresno** — Wingate Co. Inc., Chestnut and Date St., R. E. Wingate, Pres.; sulphur mill and redwood and grape stake wholesale. \$150,000. (A).

**San Jose** — C. B. Hobbs Corp., C. B. Hobbs, Pres.; manufacturing Saper Collier Charcoal Briquets. 12,000 sq. ft. (A).

**Santa Clara** — Memorex Corp.; research and production facility of electronic memory systems. (Mission Industrial Park) 20,000 sq. ft. \$1 million. (C).

**Stockton** — Flintkote Co., Eight Mile Rd.; asbestos cement pipe. \$Multi-million. (C).

### COLORADO

**Arvada** — Thoro Products, Richard Newman, Pres., 6611 W. 58th Place; cleaning products. In operation. 10,000 sq. ft. \$110,000. (A).

**Golden** — Electronics Controls, (Div. Dorsett Electronics, Inc.); automatic Proximity switch, electronic thermometer for extremely accurate measure. 9,000 sq. ft. (C).

### CONNECTICUT

No Plants Reported.

### DELAWARE

No Plants Reported.

### DIST. OF COLUMBIA

No Plants Reported.

### FLORIDA

**Bartow** — Plastic Structures, Inc.; fabrication of plastic. Oper. date: 1962. (B).

**Boca Raton** — Gulf Eastern Corp., L. D. Johnston, Jr., Plt. Mgr.; corrugated boxes. (B).

**Clearwater** — Peaslee Metal Products Co., Inc., William Peaslee, Pres.; small instrument parts & industrial machinery. 6,400 sq. ft. \$50,000. (C).

**Clewiston** — Florida Cane Products Corp., Albert A. Mesa, Pres.; raw sugar. Oper. date: 1962. (C).

**Delray Beach** — Tom Kincaid Co., Tom Kincaid, Owner; aircraft & marine accessories. 9,000 sq. ft. (B).

**Flemings Island** — Eclipse Plastic Industries, Inc., E. G. Engman, Jr., Acting Pres.; plastic containers & Pipe. 16,000 sq. ft. 10 acre site. \$500,000. (B).

**Hollywood** — United International Dynamics Corp., William Gluck, Chief Engineer; electronic component parts. 5,000 sq. ft. (B).

**Jacksonville** — American Can Co., William C. Stolk, Chairman; soft drink packaging. Oper. date: 1962. \$1 million. (B).

**Lakeland** — V-Way Co., William B. Stevens, Pres.; custom trailer units, assembling road-building, hauling equipment. (B).

**Miami** — Diesel Injection Products, Inc., Robert Benjamin, Pres.; ship conversion. Oper. date: March, 1962. (B).

**Miami** — Gulf Coast Casuals of Miami, Inc., Toby Berger, Pres.; men's cabana sportswear. (B).

**Miami** — Southern Sample Card, Inc., A. P. Bellantonio, Pres.; sample cards. Oper. date: May 1962. (B).

**Miami** — Thunderbird Products Corp., Francis C. Weiss, Exec. Vice Pres.; boats. Oper. date: Jan. 1962. (B).

**Pensacola** — Gustav Hirsch Organization, Inc., J. A. Edwardson, Treas.; telephone switchboard equipment. (B).

### GEORGIA

**Jackson** — American Mills of Griffin, R. P. Shepard Jr., Pres.; knit underwear for children. 27 acre site. (C).

### HAWAII

**Honolulu** — Hawaii Aluminum Co., Pier #35, Michel A. Picard, Exec. Vice Pres.; aluminum extrusion plant. \$1 million.

### IDAHO

No Plants Reported.

## THE TOP TEN

The following ten states ranked highest in new plant announcements as reported to INDUSTRIAL DEVELOPMENT during the six-month period April to September, 1961. The figure to the right represents each state's actual six-month total.

1. NEW YORK	197
2. OHIO	87
3. ILLINOIS	87
3. MASSACHUSETTS	85
4. FLORIDA	79
5. TEXAS	74
6. CALIFORNIA	68
7. PUERTO RICO	66
8. PENNSYLVANIA	58
9. NORTH CAROLINA	48

### ILLINOIS

**Barrington** — Kendall Co., surgical dressings. 40,000 sq. ft. Comp. date: Summer 1962.

**Chicago** — Bell Screw Co., 6246 Broadway; screws, nuts, bolts and washers. 15,000 sq. ft.

**Chicago** — Bond Chemical Co., 2100 Fulton St.; tack rags and cloth. 18,000 sq. ft.

**Chicago** — Century Display Manufacturing Corp., 11500 W. King St.; fabricator of point of purchase displays. (Clearing Industrial Dist.) 60,000 sq. ft.

**Chicago** — Crown Supply Co., Lynch St. and Elston Ave.; industrial tools. 26,000 sq. ft.

**Chicago** — Freund Can Co., 4441 S. Cottage Grove Ave.; metal containers. Oper. date: late 1961. 35,000 sq. ft.

**Chicago** — General Forwarding Co., 225 W. 58th St.; packaging for shipment. 28,000 sq. ft.

**Chicago** — W. W. Grainger, Inc., 5959 W. Howard St.; distributor of motors and electrical supplies. 130,000 sq. ft. (relocation).

**Chicago** — Harmony Co., 4600 S. Kolin Ave.; manufacturer of guitars and other string instruments. 85,000 sq. ft. (relocation).

**Chicago** — Instrument Tool and Engineering Corp., 4034 N. Kolmar Ave.; plastic products. 18,000 sq. ft.

**Chicago** — Photo Materials Co. and Marin-Yale, Inc., 2450 Estes Ave. (Centex Industrial Park); photographic equipment and office machines. 30,000 sq. ft.

**Chicago** — P.M.A. Mild Distributors, Inc., 2606 N. Elston Ave., dairy products processing and distributing. 100,000 sq. ft.

**Chicago** — Screw Craft Products Co., 1253 W. Diversey Pkwy.; screw machine parts and gears. 21,000 sq. ft.

**Chicago** — A. M. Steigerwald Co., 1440 Wrightwood Ave.; printer of labels, seals and tags. 42,000 sq. ft.

**Niles** — Vapor Heating Corp., 6420 W. Howard St.; warehouse. In oper. 16,000 sq. ft.

### INDIANA

**Columbus** — Reliance Electric & Engineering Co.; mechanical and electrical drivers for industrial use. 210,000 sq. ft. (D).

### IOWA

**Burlington** — Winegard Co.; electronic amplifiers to boost TV signals. Under construction. \$100,000.

### KANSAS

**Bonner Springs** — Southwest Ornamental Iron Co., Norman Nelson, Pres.; architectural metal work. Oper. date: Oct. 1961. 31,250 sq. ft. 12 acre site. (B).

**Kansas City** — Doyle Packing Co., Inc., John Doyle, Pres., Oper. date: Feb. 1962; dog food. 50,000 sq. ft. (B).

**Kansas City** — Samuel Dodswoth Print & Stationery Co., C. D. Barton, Pres.; county record books, lithographing, commercial printing. In oper. 50,000 sq. ft. (B).

**Salina** — Sunflower Prestress, Inc., George A. Johnson, Pres.; prestressed concrete bldg. products. In oper. 14 acre site. \$250,000. (A).

### KENTUCKY

**Clinton** — Garon Co., Samuel Dorsky, Pres.; men's and boys' knitted sport shirts. Oper. date: Sept. 1961. (C).

**Florence** — Great Lakes Carbon Corp.; perlite insulation. \$3,500,000. (C).

**Greenville** — National Lock Co., Ray Herbert, Plt. Mgr.; wood screws. (B).

**Louisville** — E. I. DuPont de Nemours & Co., Camp Ground Rd., H. L. Green, Mgr.; vinyl fluoride. Oper. date: mid 1962. \$Multi-million. (A).

**Louisville** — Rohm & Haas Co., Camp Ground Rd.; adipic acid. Oper. date: mid 1962. \$Multi-million.

### LOUISIANA

**Baton Rouge** — Cotton's Inc.; bakery. \$148,096.

**Baton Rouge** — Humble Oil and Refining Co.; dock loading system for benzene. \$166,000.

**Empire** — Empire Menhaden Co.; fish meal, oil and solubles. \$128,270.

**Franklin** — Columbian Carbon Co.; furnace type carbon black. \$2 million.

**Hammond** — Arkansas Frozen Foods, Inc.; food processing. \$213,694.

**Harvey** — Tube-Kote, Inc.; application of plastic coatings to oil field pipe. \$225,500.

**Harvey** — Apollicators, Inc.; plastic coated pipe. \$246,007.

**Krotz Springs** — Anchor Gasoline Corp.; processing natural gasoline. \$241,400.

**Shreveport** — Universal Oil Products Co.; synthetic catalyst. \$100,000.

**Springhill** — International Paper Co.; sulphate pulp and paper. \$854,000.

**Springhill** — American Cyanamid Co.; liquid rosin. \$118,800.

### MAINE

No Plants Reported.

## NEW PLANTS

### MARYLAND

**Baltimore** — Alexander Milburn, Inc., 403 Penn St., William E. Henning, Jr. Pres.; welding equipment and electronic control systems. 21,000 sq. ft. (B).

**Baltimore** — Knight Press, 6 N. Broadway, Louis Bulmasn, Owner; rotary offset printers. 15,000 sq. ft.

**Baltimore** — Liquid Tile Coating Corp. of America, Carl Taseff, Pres. Polyester tile precoating operation. 10,000 sq. ft.

**Baltimore Cty.** — Acadia Manufacturing Corp., White Marsh, Louis J. Barry, Pres.; aluminum doors and windows. 200,000 sq. ft.

**Baltimore Cty.** — T-FAL Corp., Timonium Rd., Thomas G. Hardie, Pres.; aluminum fry pans, chicken fryers, sauce pans and egg pans. 10,000 sq. ft.

### MASSACHUSETTS

**Burlington** — R. C. A. Corp.; electronic products. Oper. date: Oct. 1961. 160,000 sq. ft. \$1 million. (C).

**Cambridge** — Federal Liquors Ltd., distribution warehouse. In oper. 90,000 sq. ft. \$400,000. (B).

**Chicopee Falls** — Shawinigan Resins Corp.; mfg. plastic materials. 30,000 sq. ft. \$500,000. (B).

**East Boston** — Technical Research Corp.; mfg. microwave antennas. In oper. 25,000 sq. ft. (B).

**Natick** — Judson Engineering Corp.; eng. and design. In oper. 23,000 sq. ft. (B).

**New Bedford** — Alberox Corp.; mfg. ceramics. Oper. date: Sept. 1961. 27,000 sq. ft. (C).

**Orange** — Mohawk Millwork; wood products. Oper. date: Dec. 1961. 55,000 sq. ft. (existing bldg.) (B).

**Plainville** — Masslite, Inc.; blocks and other concrete products. \$1.0 million.

**South Hadley** — C & G Machine & Tool Co.; machine tools. In oper. 25,000 sq. ft. (B).

**Wakefield** — Sylvania Electric Co.; design and develop electronics. 30,000 sq. ft. (existing bldg.) (B).

**West Springfield** — Strathmore Paper Co.; paper products. In oper. 20,000 sq. ft. (B).

**Wilmington** — Avco Corp.; missile research and development. 79,000 sq. ft. \$700,000. (B).

**Winchester** — Atlee Corp.; mfg. electronics. In oper. 35,000 sq. ft. (B).

**Woburn** — General Foods Corp.; food products warehouse. Oper. date: Sept. 1961. 30,000 sq. ft. (B).

### MICHIGAN

**Ann Arbor** — Greater Ann Arbor Research Park; research. Plans announced. \$25 million.

**Detroit** — Confab Corp., Mike Presnall, Pres., car-haul trailers. 24,000 sq. ft. (B).

**Detroit** — Michigan Metal Processing Corp., C. F. McDevitt, Owner; metal processing. 48,000 sq. ft. (existing bldg.) (B).

**Detroit** — Quality Pickling & Processing Co.; pickling and treating of steel sheets, plates and coils. 40,000 sq. ft. (existing bldg.) (C).

**Grand Rapids** — Architectural Systems, Inc., S. W. Oppenhuizen, Pres.; movable partitions and walls for office bldgs, schools. Under const. \$210,000. (B).

**Munsing** — Cleveland-Cliffs Iron Co., David R. Forrest, Vice Pres.; sawmill. Plans announced. \$1 million. (B).

### MINNESOTA

**Eagan Township** — Globemaster, Inc.; hand tools. Oper. date: mid 1962. 100,000 sq. ft. \$1 million.

**Mendota Heights** — Economics Laboratory, Inc., E. B. Osborn, Pres.; research center, chemical cleaning compounds. Oper. date: early 1962. \$400,000.



## I. D. CALENDAR

### JANUARY

ID January Issue features Real Estate Brokers Reference Study.

### FEBRUARY

ID February Issue features Electric Utilities Reference Study.

### MARCH

ID March Issue features the Ports Reference Study and the American Industrial Development Council Reference Study.

### APRIL

ID April Issue features Industrial Parks Reference Study.

American Ind'l Dev't Council plans 1962 annual convention at Cleveland, Ohio.

### MAY

ID May Issue features the Blue Book of Southern Progress Reference Study and the Trucking Companies Reference Study.

### JUNE

ID June Issue features Gas Utilities Reference Study.

Engineering Economy Division of American Society for Engineering Education 1962 Annual Meeting planned at Colorado Springs, Colo.

### JULY

ID July Issue features New England Reference Study and Railroad Reference Study.

### AUGUST

ID August Issue features Canadian Reference Study and State Agencies Reference Study.

### SEPTEMBER

ID September Issue features Financial Institutions Reference Study.

11th-15th: AMA, "Real Estate — Fundamentals of Corporate Real Estate Management" (Orientation No. 2228-91). AMA Academy, Saranac Lake, N. Y. Reservations as above.

11th-16th: The International Industrial Conference, sponsored by Stanford Research Institute & National Industrial Conference Board, convenes in San Francisco for five days.

18th-20th: AMA, "Corporate Planning" (Workshop No. 2113-06). LaSalle Hotel, Chicago. Reservations as above.

18th-22nd: International Bank for Reconstruction and Development, International Monetary Fund, International Finance Corporation, International Development Association: Annual Meetings of Boards of Governors. Vienna, Austria. Contact: Office of International Conferences, Department of State, Washington 25, D. C.

25th-28th: Industrial Building Exposition & Congress. For information and reservation contact: New York Coliseum, Columbus Circle, New York 19, N. Y.

28th-29th: Eleventh Annual Texas Industrial Development Conference. Contact: Box 213 F. E., College Station, Texas.

### OCTOBER

ID October Issue features the Annual Site Selection Handbook.

2nd-4th: Canadian Chamber of Commerce Annual Conference, Halifax, Nova Scotia.

2nd-6th: AMA "Presidents' Round Table (Advanced)". For reservation contact: AMA Grove, Hamilton, N. Y.

3rd: "Society of Industrial Realtors Conference" to be held at Los Angeles. For reservation contact: H. R. Hudson, 210 West & 7th St., Los Angeles 14, Cal.

5th-6th: Minnesota's I.D. Conference, Rochester, Minn.

9th-11th: AMA, "Planning — Forecasting & Planning in the Defense Industries (Workshop No. 2125-05). Hotel Astor, New York City. Reservations as above.

23rd-24th: Missouri I.D. Conference, Governor Hotel, Jefferson City, Mo.

24-25: Industrial Development Research Council-Founding meeting — The IDRC was founded to "promote the advancement of more scientific techniques, methods and procedures in the field of industrial expansion planning." Interested industrialists can get further details by contacting the Exec. Vice Pres., Industrial Development Research Council c/o Conway Publications, Inc., 2592 Apple Valley Rd., Atlanta 19, Ga.

25-27: National Management Association—National Convention. To be held at Sherman Hotel, Chicago, Ill. For further information contact: NMA Headquarters, 321 W. First St., Dayton, 2 Ohio.

29th-31st: Southern Industrial Development Council Conference, Tampa Terrace Hotel, Tampa, Florida.

### NOVEMBER

ID November Issue features Air Transport Reference Study.

Tennessee plans ID Conference. Watch future issues for further details.

Society of Industrial Realtors plans Fall Convention at Miami, Fla.

### DECEMBER

ID December Issue features the Gulf Caribbean Area Reference Study.

5th-7th: Building Research Institute Fall Conference (Div. of Engineering & Industrial Research). Shoreham Hotel, Washington, D. C. Contact above organization at 2101 Constitution Ave., Washington 25, D. C.



## NEW PLANTS

### MISSISSIPPI

**Tupelo** — Sadler Manufacturing Co.; men's and boys' shirts. (C).  
**Cedar Hill** — Rolan-O-Lounger, Inc.; furniture. (B).

### MISSOURI

No Plants Reported.

### MONTANA

**Philipsburg** — Montana Forest Products Co.; sawmill. \$1.5 million. (B).

### NEBRASKA

No Plants Reported.

### NEVADA

No Plants Reported.

### NEW HAMPSHIRE

No Plants Reported.

### NEW JERSEY

**Newark** — All Mica Distributing and Fabricating Co.; bars, counters, and store fixtures. 10,000 sq. ft.

**Newark** — George Wolch Co. of New York, processor of scrap rubber and plastic material. 100,000 sq. ft.

**North Brunswick** — Goodyear Tire & Rubber Co., rubber products. 400,000 sq. ft.

**Parsippany** — Steinen Manufacturing Co., oil burners. 35,000 sq. ft.

### NEW MEXICO

No Plants Reported.

### NEW YORK

**Amsterdam** — Esquire Novelty Corp.; accessories for water recreation. Completed. 60,000 sq. ft. (B).

**Brooklyn** — Bristol Dynamics, Inc., 1943 Pitkin Ave.; Electronic components. Oper. date: Nov. 1961. 25,000 sq. ft.

**Brooklyn** — Jayem Manufacturing Corp., 53 St. and 1 Ave.; steel office equipment, filing cabinets. 29,000 sq. ft. (existing bldg.) \$75,000. (B).

**Brooklyn** — Kentile, Inc., 35 2nd Ave.; asphalt vinyl and cork tiles. Operation date: Fall 1962. 14,000 sq. ft.

**Brooklyn** — Moe Lichtenstein, Inc., 561 Grand Ave.; decorator linens. In operation. 13,000 sq. ft.

**Brooklyn** — Progress Knitwear Corp., 250 44 St.; knit apparel. In operation. 4,000 sq. ft. \$25,000. (B).

**Bronx** — Artistic Latex Foam Co., Inc., 1218 Brook Ave.; molded display forms. Oper. date: Jan. 1962. 19,000 sq. ft. (B).

**Cohoes** — Deltex Fabrics Inc.; fabrics, knitting, dyeing & bleaching. Completed. 15,000 sq. ft. \$20,000. (A).

**Cohoes** — Deltex Garments, Inc.; infants' underclothing. Completed. 25,000 sq. ft. \$35,000. (B).

**Deerpark** — Andmore Sportswear Corp.; women's bathing suits. Plans announced. 20,000 sq. ft.

**Elmhurst** — Niemand Bros., Inc., 43-23 91 St.; paper tubes. 12,000 sq. ft.

**Farmingdale** — Monitor Machinery Corp.; aircraft products. Oper. date: Fall 1961. 25,000 sq. ft. (C).

**Goshen** — Mack Bros. Wholesale Meat Co.; meat processing. Oper. date: Sept. 1961. 8,000 sq. ft. \$175,000. (B).

**Greenpoint** — Harte & Co., Inc., 77-87 Commercial St.; polyethylene products, vinyl film and sheeting. Oper. Date: Spring 1962. 44,000 sq. ft.

**Hamptonburgh** — Sun Chemical Corp., Div. (Dyna-Foam Corp.); plastics. Plans announced 100,000 sq. ft. \$250,000. (B).

**Huntington Station** — FAF Instruments Corp.; science age systems. In operation. 8,000 sq. ft. (B).

**Jamaica** — Family Publications Service, Inc.; publishing. In operation 2,000 sq. ft. (B).

**Long Island City** — Eaves Costume Co., Inc., 39-11 9 St.; warehouse; Oper. date: Sept. 1961. 11,000 sq. ft.

**Long Island City** — Graphic Die Cutters, Inc., 50-35 35 St.; advertising displays. Oper. date: Aug. 1, 1961. 20,000 sq. ft.

**Long Island City** — Steelcraft Tool Corp., 36-50 31 St.; machinery and parts. In operation. 35,000 sq. ft.

**Mohawk** — Peggy Ann Dress Co.; dresses. Completed. 15,000 sq. ft. \$25,000. (B).

**New York** — Cu Lin Co., 235 W. 162 St.; condiments. Oper. date: Aug. 1, 1962. 11,500 sq. ft.

**Phoenix** — Atlantic Refining Co.; asphalt. Completed. \$1 million.

**Plainview** — Castwell Foundry Co.; aircraft castings. In operation. 25,000 sq. ft. (B).

**Plainview** — Edmos Products; knit goods. Oper. date: Sept. 1961. 16,000 sq. ft. (A).

**Rosendale** — Century Cement Co.; aggregate. Plans announced. \$2 million.

### NORTH CAROLINA

**Burlington** — Holt Hosiery, James McCormick, Pres.; finishing plant. 40,000 sq. ft. \$300,000. (C).

**Burlington** — Kayser-Roth Co. of Burlington; finishing plant. 160,000 sq. ft. \$2 million. (D).

**Charlotte** — American Hospital Supply Co., James D. Vail, Dist. Mgr.; hospital supplies. 18,000 sq. ft. \$225,000. (B).

**Charlotte** — Chadbourn-Gotham, J. Chadbourn Bolles, Pres.; hosiery. 15,000 sq. ft. \$100,000. (C).

**Charlotte** — Chase Brass & Copper Co., E. J. Wasilewski, Mgr. 5,000 sq. ft. \$100,000. (A).

**Charlotte** — General Parts Warehouse, 2330 N. Davidson, O. T. Sloan, Pres.; parts. 10,000 sq. ft. \$200,000. (A).

**Charlotte** — Hydro-Prints, Inc., 201 So. Hoskins, Hugo Rosenberger, Gen. Mgr.; screen printing of household textile goods. 74,000 sq. ft. \$150,000. (C).

**Charlotte** — Owens-Illinois, Hovis Rd., Closure & Plastics Div.; plastics. Under construction. 86,000 sq. ft. \$1 million. (C).

**Charlotte** — Putnam Chemical Co.; dye-stuffs, pigments and other chemicals; textile industries. (B).

**Hamilton** — Beaunit Mills Co., Inc.; knitted synthetics. (D).

**High Point** — Best Wear Hosiery Co.; seamless hosiery. In operation. 18,000 sq. ft. (C).

**High Point** — Seco Textile Corp.; belts or ladies' sports and dress wear. Under construction. 10,000 sq. ft.

**Lowell** — Belle Chemical Co., Inc.; dye-stuffs and other textile chemicals. (B).

**Pittsboro** — Webster Products, Inc.; broiler processing. (B).

**Reidsville** — Carolina Metals, Inc., smelting and refining of non-ferrous metal. (B).

### NORTH DAKOTA

No Plants Reported.

### OHIO

**Akron** — Reiter & Harter Dairy Inc., 1415 W. Waterloo Rd.; dairy products. 3 acre site \$200,000.

**Alliance** — Cunningham-Pickett Inc., W. Main St., N. A. Cunningham, Pres. 34,000 sq. ft.

**Ashtabula** — Molded Fiberglass Body Co., 3714 Ann St.; fiberglass auto bodies and boats. 60,000 sq. ft. \$500,000.

**Bedford Hts.** — John W. Winterich and Associates, Inc., 22901 Aurora Rd.; designs for Church furniture and furnishings. Oper. date: Oct. 1, 1961. \$400,000.

**Bellevue** — International Metal Hose Co., Goodrich Rd., Pat M. Sullivan, Pres.; flexible steel conduit & automotive tubing. 45,400 sq. ft. 10 acre site. \$175,000.

**Berea** — Forest City Containers Inc., 55 First Ave.; corrugated fiberboard containers. In operation. 9 acre site. \$225,000. (B).

**Cleveland** — Bud-Wilco Inc., 8123 Clinton Rd. \$188,000.

**Cleveland** — Ohio Chemical & Surgical Equipment Co., Div. (Air Reduction Co., Inc.) Stanford Smith, Plt. Mgr.; cyclopropane ethylene. 14,000 sq. ft. 7 acre site. \$225,000.

**Columbus** — August Wagner Breweries, Inc., 605 S. Front St., James Amento, Pres.; beverages. 9,000 sq. ft. 11 acres. \$200,000.

**Columbus** — Commercial Paste Co., South of Henderson Rd. East of Kenny Rd.; adhesives. 54,000 sq. ft. 13 acre site. \$450,000.

**Cortland** — Massacci Bros. Inc., N. River Rd. at Supreme St.; asphalt. \$165,000. (A).

**Dayton** — United States Plywood Corp., 4395 Springfield St., Arthur Werner Branch Mgr.; plywood products. 20,000 sq. ft. \$125,000.

**Delta** — H. W. Madison Co., J. M. Irwin, Exec. Vice Pres.; pickles. \$250,000.

**Edgerton** — Auburn Burner Co., Belmont St. 20,000 sq. ft. \$100,000.

**Heath** — Pure Oil Co.; alkylation unit. \$2 million.

**Mentor** — Lintern Corp.; air conditioners, high temperature equip. signal lights. 40,000 sq. ft. 11 acre site. \$151,000.

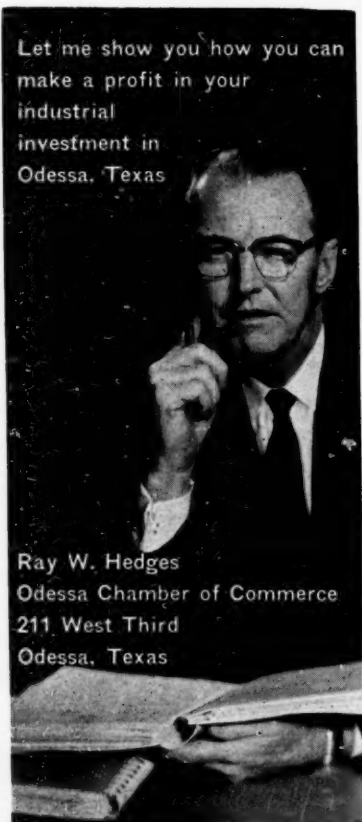
**Mt. Vernon** — Armstrong & White Co., Donald Calderwood, Pres.; steel stamping. 10,000 sq. ft. (B).

**New Boston** — Detroit Steel Corp., 3879 Rhodes Ave., A. E. Reinhard, Vice Pres. \$5 million.

**Oakley** — Ohmart Corp., Philip E. Ohmart, Pres.; nuclear gauging systems. 10,000 sq. ft. 4 acre site. \$200,000.

**Omaha** — Olin Mathieson Chemical Corp.; chemical products. \$Multi-million. (C).

**Pomeroy** — Midwest Steel Corp., East Main St., Frederick W. Klein, Plt. Mgr. (B).



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 Odessa, Texas



## NEW PLANTS

**Ravenna** — Flintkote Co.; asbestos-cement pressure pipe. 186,000 sq. ft. \$10 million. (C).

**Lowellville** — Permeco Metal Fabricating Co., East Liberty St., L. A. Orlando, Vice Pres.; metal fabricating. 20,000 sq. ft., \$75,000. (B).

**Toledo** — Mid-State Terminals, Clayton W. Johnson, Gen. Mgr.; grain. 5 acre site. \$2.5 million. (A).

### OKLAHOMA

**Ardmore Industrial Airpark** — Clifton's Old Fashioned Hickory Smoked Hams, Davison Goff, Mgr.; meat processing. (B).

**Oklahoma City** — Loyd A. Fry Roofing Co.; asphalt roofing materials. 100,000 sq. ft. \$1 million. (B).

### OREGON

**Salem** — Western Farmers Association; chemical fertilizer blending. \$200,000.

### PENNSYLVANIA

**Gettysburg** — Timely of Gettysburg, Inc.; furniture. In operation. 100,000 sq. ft. (B).

**Huntingdon** — Reeves Parvin & Co.; groceries. Oper. date: Nov. 1961. 60,000 sq. ft. \$500,000. (B).

**Johnston** — C. H. Page Bedding Co.; bedding. In operation. 62,000 sq. ft. \$145,000. (B).

**Lancaster** — Intelligencer Printing Co.; printing. Oper. date: fall 1962. 40,000 sq. ft. (C).

**Lansdale** — Capital Soap & Chemical Co.; sanitary chemicals. Operation date: Dec. 1962. 40,000 sq. ft. \$400,000. (B).

**Morgan** — Spartan Abrasive Co., Inc.; grinding wheels. In operation. 20,000 sq. ft. \$225,000. (B).

**Petersburg** — Petersburg Transformer Corp.; transformers. Oper. date: Sept. 1961. 20,400 sq. ft. \$200,000. (C).

**Philadelphia** — Air Freightways, Inc.; aircraft & missile hardware. Oper. date: Sept. 15, 1961. 13,200 sq. ft. \$110,000. (A).

**Philadelphia** — Albert H. Voigt, Inc.; medicine cabinets, shower doors. In operation. 80,000 sq. ft. \$200,000.

**Philadelphia** — Electric Hotpack Co., Inc.; scientific equipment. In operation. 17,000 sq. ft. \$250,000.

**Wilkes-Barre** — H. Alter & Co.; men's coats and jackets. 10,000 sq. ft. (B).

**Yeadon** — Berm Studios, Inc.; exhibits and signs. In operation. 30,000 sq. ft. \$225,000. (B).

**York** — Wondercraft, Inc.; casters and embedders of lucite. 16,000 sq. ft. \$100,000.

### PUERTO RICO

**Aguada** — Defiance Machine & Tool Inc., Roy Schacht; automatic marking equipment (tools, jigs, dies) 11,990 sq. ft. (B).

**Arecibo** — Austill Waxed Paper Co. of P. R., Inc., Wm. H. Austill, Mgr.; waxed paper. Oper. date: Dec. 1961. 11,256 sq. ft. (A).

**Caguas** — El Finale, Anna Gutman, Mgr.; fabric & leather dresses, gloves. 11,716 sq. ft. (B).

**Caguas** — Solar Products. Corp., Harold Silverman, Mgr.; Ladies wearing apparel. In operation. 6,000 sq. ft. (B).

**Canovanas** — Ida Mfg., Alejandrino Davila, Mgr.; ladies' wearing apparel. In operation. 4,000 sq. ft. (B).

**Carolina** — Caribbean Metal Fabricators, Ed Slaughter, Mgr.; food service equipment. In operation. 13,400 sq. ft. (B).

**Carolina** — Laboratorios Gravi, Inc., Dr. Jose M. Cuevas, Jr., Mgr.; tooth paste, perfumes, toilet-ries, nail polish. 12,600 sq. ft. (B).

**Gurago** — P. R. Tanning Corp. #4, Ralph Steinberg, Mgr.; finishing of leather. 11,440 sq. ft. (B).

**Hato Rey** — Sta. Brite Fluorescent Mfg. Co. of P. R., Inc., Alberto Sampayo, Mgr.; fluorescent lights and metal products. In operation. 6,000 sq. ft. (B).

**Hato Rey** — Video Instruments of P. R. Ind., Isac Ergas, Mgr.; strain gage power supplies, signal amplifiers, monitor panels. In operation. 2,300 sq. ft. (B).

**Isabela** — Wood Industries Corp., Moises Amieiro, Mgr.; baby cribs, play wears, beds. 11,443 sq. ft. (B).

**Mayaguez** — Isle Die Cast Inc., Oscar Zielke, Mgr.; aluminum & zinc die castings. 11,503 sq. ft. (B).

**Mayaguez** — Supreme Novelty Co., David Rivera Pinzon, Mgr.; casual shoes. In operation. 1,200 sq. ft. (B).

**Penuelas** — Ponce Chemicals Industries; chlorine, caustre soda. 18,075 sq. ft. (B).

**Rio Grande** — General Metal Products Corp., John Napoli, Mgr.; cafeteria &

refrigeration equipment. Oper. date: Nov. 1961. 23,000 sq. ft. (B).

**Rio Piedras** — Cannon Electric; electric connectors. 13,956 sq. ft. (B).

**Rio Piedras** — Reichhold Chemicals del Caribe, Inc., Adolfo Vilanova, Jr., Mgr.; resins & plastic substances. 4,000 sq. ft. (B).

**Rio Piedras** — Vermiculite P. R. Inc., A. Grajales, Mgr.; insulating concrete products, underground pipes, roof decks. 5,000 sq. ft. (B).

**Savanna Grande** — Licoreria Busigo, Gualberto Busigo, Mgr.; rums, cordials. In operation. 1,200 sq. ft. (B).

**San Lorenzo** — Amity Leather Products, Thomas J. Rolfs, Jr. Mgr.; leather wallets, key cases. 11,451 sq. ft. (C).

# MAKE YOUR MARK IN BISMARCK

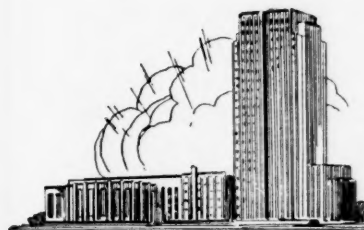
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**BISMARCK INDUSTRIES, Inc.**

218 East Broadway  
BISMARCK, NORTH DAKOTA

## NEW PLANTS

**Santruce** — Semiconductor Industries, Inc., Bernard Horwitz; two-way radios, rangehorns. 4,000 sq. ft. (B).

**Utah** — Republic Electronics Inc., Juan D. Ramirez, Mgr.; power tools, drills, saws. In operation. 5,900 sq. ft. (B).

**Villalba** — Sweet Sue of P. R. Inc., Theodore Freilick, Mgr.; children's dresses, blouses, jumpers. 12,677 sq. ft. (B).

**Yabucoa** — Buso Food Products Corp., Pincio Buso; coconut & guava pastes, plantain products. 12,098 sq. ft. (B).

### RHODE ISLAND

**Middletown** — Transcom Electronics, Inc., 124 Aquidneck Ave., Henry T. Sullivan, Pres.; synthetic quartz, miniature electronic coils. Oper. date: late 1961. 16,000 sq. ft. (B).

**Providence** — Adolph Meller Co., 387 Charles St., Max E. Meller, Pres.; synthetic sapphire components for jewelry & optical goods. Oper. date: 1962. 10,000 sq. ft. \$100,000 (B).

**Providence** — Marquette Cement Mfg. Co., Terminal Rd.; bulk cement distribution. \$400,000.

**Providence** — Lehigh Portland Cement Co., Municipal Wharf; bulky cement distribution. Oper. date: Early 1962. 70,000 sq. ft. \$234,000.

### SOUTH CAROLINA

No Plants Reported.

### SOUTH DAKOTA

No Plants Reported.

### TENNESSEE

**Erwin** — Tenacust, Div. of (Safeguard Corp.) Cincinnati, Ohio; pillows and cushions. (B).

**Franklin** — Jamison Bedding, Inc.; mattresses, bed & box springs. 330,000 sq. ft. (C).

**Franklin** — Lasko Metal Products, Inc.; small electric appliances. 50,000 sq. ft. 10 acre site. \$100,000. (C).

**Gallatin** — Hamilton Casco, Inc.; office & upholstered furniture. 211,000 sq. ft. 46 acre site. \$2 million. (C).

**Gallatin** — Shaffer Corp. (Div. Dominion Electric Co.); electric hair dryers. 73,000 sq. ft. (C).

**Greenville** — Avis Industrial Corp.; locks. 44,000 sq. ft. \$400,000. (D).

**Lebanon** — Lebanon Woolen Mills; blankets. \$100,000.

**Memphis** — Modern Products, Inc.; aluminum doors. \$50,000. (B).

**Memphis** — Southern Wire Mesh Co.; welded wire mesh, masonry reinforcing. \$100,000.

**Milan** — ITT Kellogg (Div. International Tel & Tel.); electronic communications equipment. \$250,000. (C).

**Monterey** — Ely & Walker (Div. Burlington Industries); shirts. (C).

**Morristown** — Froco, Inc.; commercial laundry & dry cleaning equipment. (B).

**Newport** — Newport Mfg. Co., Inc.; living room furniture. (C).

**Tulahoma** — Rivers Sign Co., R. T. Rivers, Owner; plastic signs. (B).

### TEXAS

**Austin** — Texas Emulsions, Inc., 8500 Balcones Trail; process asphalt raw materials. \$250,000.

**Bowie** — Haggard Co., E. R. Haggard, Pres.; slacks. \$80,000. (D).

**Fort Worth** — Republic Manufacturing Co., 4301 W. Vickery Blvd.; complete gas stations and component parts. 12,000 sq. ft.

**Freeport** — Nalco Chemical Co., Dr. David Braithwaite, Pres.; tetraethyl lead. Oper. date: mid 1962. \$9 million.

**Garland** — Unitron, Inc., 1624 First St., Donald E. Davis, Pres.; solid state power conversion equipment. 8,000 sq. ft. \$110,000.

**Houston** — Hydrocarbon Research, Inc.; produce oxygen and high-purity nitrogen. \$6.5 million.

**Somerville** — Som-Tex Furniture Co.; furniture. 10,000 sq. ft. (B).

**Tyler** — Kelly-Springfield Tire Co., George B. Newman, Pres.; tire mfg. Oper. date: March 1962. 200,000 sq. ft. (D).

**Tyler** — Kordite Co., (Div. of National Distillers and Chemical Corp.) George Fearnley, Jr., Plt. Mgr. 17 acre site. \$1 million (C).

### UTAH

No Plants Reported.

### VERMONT

No Plants Reported.

### VIRGINIA

**Hillsville** — Sprague Electric Corp.; electrical components. Oper. date: Nov. 1961. (B).

**Norton** — Norton Garment Co.; women's blouses. In operation. (B).

**Portsmouth** — News Publishing Co.; newspaper, job printing. In oper. \$100,000. (B).

**Roanoke** — Madisonite Co.; knitted fabrics. Oper. date: Late 1961. (B).

**Roanoke** — Sealtest Foods, Inc.; milk processing. Oper. date: Early 1962. (C).

**Springfield** — MPI Glass Fibers; fiberglass. In operation. \$100,000. (B).

**Springfield** — Sealtest Dairy Products; dairy products. In operation. (B).

### WASHINGTON

**Everett** — Seven-Up Bottling Co.; beverages. Oper. date: Oct. 1961. 10,000 sq. ft.

**Seattle** — Transport Trailer & Equipment Co., Inc., 34-6th Ave. S.; construction of trailers. 51,920 sq. ft. \$250,000. (B).

**Sedro Woolley** — Skagit Steel & Iron Works; engineering, office bldg. Oper. date: Oct. 1961. 22,000 sq. ft.

**Spokane** — General Electric Co., Trent and Mission; electrical apparatus service center. \$200,000.

**Yakima** — Gammie-Reed Corp.; fruit packing and cold storage plt. In operation. 31,000 sq. ft.

### WEST VIRGINIA

No Plants Reported.

### WISCONSIN

**Berlin** — Wilson-Hurd Manufacturing Co.; advertising novelties and various decorative and metal products; 17,600 sq. ft. \$150,000.

**Sheboygan** — Wisconsin Electric Power Co. \$130,000.

### WYOMING

**Cheyenne** — Colorado Oil & Gas Co.; gasoline extrusion plt. In operation. \$1 million.

**Cheyenne** — Union Pacific Railroad Co.; gasoline extrusion plt. In operation. \$3,250,000.

## CANADA

### ALBERTA

**Calgary** — Alrco Products Ltd., 2042 - 10th Ave. S. W., William Morris, Plt. Mgr.; gas fired furnaces. In operation. 12,000 sq. ft. \$100,000 (A).

**Carstairs** — Home Oil Co. Ltd.; gas processing and sulphur recovery plt. Under construction. \$4 million.

**Fort Saskatchewan** — Sherritt Gordon Mines Ltd.; urea plt. Under construction. \$3 million.

### BRITISH COLUMBIA

**Crofton** — British Columbia Forest Products Ltd.; newsprint. Constr. date: late 1961. Completion date: 1964. \$25 million.

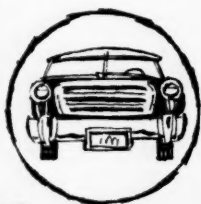
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brings them  
to Atlanta?

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**Southern Bell**



## NEW PLANTS

### MANITOBA

No Plants Reported.

### NEW BRUNSWICK

No Plants Reported.

### NEW FOUNDLAND

No Plants Reported.

### NOVA SCOTIA

No Plants Reported.

### ONTARIO

**Galt** — De Zurik Co. of Canada Ltd., (Div. De Zurik Co., Sartell, Minn.); industrial valves. \$250,000. (B).

**Toronto** — Borden Co. Ltd., 1275 Lawrence Ave. East; dairy products. 48,000 sq. ft.

**Toronto** — S. F. Lawrason and Co. Ltd., Highway #27; chemical products. 20,000 sq. ft.

**Toronto** — Monarch Fine Foods Ltd., margarine, spreads, shortening, vegetable salad oils and dessert toppings. 80,000 sq. ft. (C).

**Toronto** — Remington Electric Shaver Co., 11 Sherway Dr. 7,000 sq. ft. (B).

**Toronto Township** — Mallory Battery Co. of Canada Ltd., N. Sheridan Way; mercury, carbon-zinc and other batteries for radio, telephone, electronic and flashlight use. 39,400 sq. ft.

### PRINCE EDWARD ISLAND

No Plants Reported.

### SASKATCHEWAN

**Regina** — Con-Force Products Ltd., R. W. Richardson, Gen. Mgr.; pre-stressed concrete. \$300,000. (B).

**Regina** — Nesco Aluminum Ltd.; aluminum fabricating plt. 6,000 sq. ft. \$125,000.

## INTERNATIONAL

**Australia** — Rolls Royce of Australia Pty. Ltd.; diesel factory. \$1.5 million. (C).

**France (Port Jerome)** — United Carbon France, S. A. (Div. United Carbon) carbon black plant. \$5 million.

**Greece (Achaia)** — E. G. Ladopoulos Co.; paper pulp. \$5.5 million. (C).

**Holland (Rotterdam)** — Imperial Chemical Ind.; acrylic moulding powders, sheet & methyl methacrylate. \$19.6 million.

**Ireland (Belfast)** — DuPont, \$Multi-million.

**Italy (Pisticci)** — Azienda Nazionale Idrogenazione Combustibili; hydrocarbons into synthetic fibers, into monomers for making plastic materials. \$51,446,950.

**Italy (Ferrandina)** — Industria Chimica del Basento; plastic and intermediate materials for artificial texture fibers through chemical transformation of natural gas. \$36,977,491.

**Italy (Ferrandina)** — Industria Chimiche Meridionali (Sub. of Manifattura Ceramica Possi); vinylidene products, methonal, acetic acid, and caustic soda. \$32,154,341.

**Jamaica** — Worchester Royal Porcelain Co.; chinaware, and ceramics. Oper. date: Jan. 1963. \$1.4 million.

**Mexico** — DuPont; tetraethyl lead. \$8 million.

**Mexico** — Industrias Quimicas de Apizaco, (Div. Rohm & Haas of Philadelphia) acrylic emulsions, pigment dispersants. \$320,000.

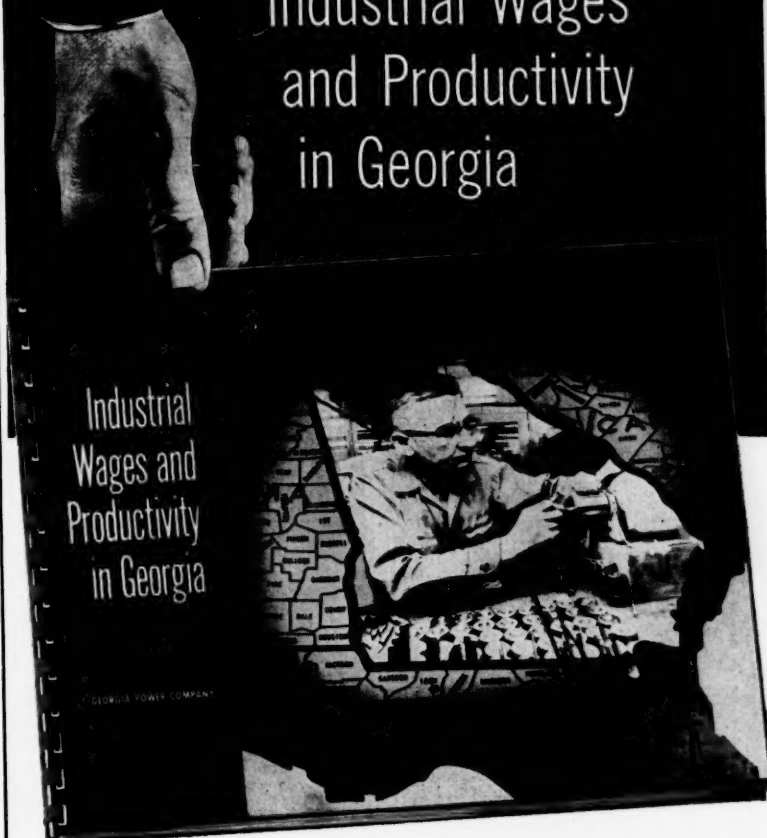
**Netherlands (Wormerveer)** — N. V. Chemische Fabriek Naarden; fractional distillation of talloil, by-product of cellulose. Oper. date: About 1963. \$2. million.

**Rhodesia and Nyasaland, Federation of** — American Independent Oil Co.; refinery producing all petroleum products now used in the Federation. \$28 million.

**Turkey** — Goodyear Tire & Rubber Co.; rubber products. \$4 million.

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INDUSTRIAL DEVELOPMENT DIVISION

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Frank Gould 1930-1943  
William Beury 1943-1955  
McKinley Conway 1956

# MANUFACTURERS RECORD

(IN REVIEW)



"What Enriches Any  
Region Enriches The  
Nation"

SEPTEMBER, 1887

(AS ABSTRACTED MORE THAN 70 YEARS LATER)

BALTIMORE, MD.

## Overproduction or Underconsumption?

Dean Swift practically described American designers in a famous remark wherein he stated that they who make "two blades of grass grow where but one grew before" are of the highest type of man. That statement clearly indicates the part that is distinctively played by the mechanical residents of this country, for it is not especially the mechanics native to this country who improve the arts and appliances, but those who come here as well from every country. The man who increases production to one-tenth more, or decreases cost that much, in an art whose product is largely consumed is as much a benefactor as he who in another art of smaller consumption quadruples the production. Unfortunately in the present stage of progress a condition of things which is inimical to society as at present constituted has been developed by this increase of the capabilities of each man who produces. This condition must be solved or we must confront anarchy. It cannot be ignored, however it may be viewed or however distasteful it may be to an investigator. We must confront it or it will confront us.

This view will strike the reader who meets it for the first time as that of an alarmist, but that is because it will be new to that reader, and because he has not studied the problem correctly. It is certain that only those who are familiar with the facts and details of modern manufacture can understand the unnatural and strained relations between capital and labor. Look at the facts one minute: The producing capacity of each unit of labor in manufacture has been in-

creased at least threefold within twenty-five years by improvement in tools, while the means to increase the consumption of each of these units has not advanced to an appreciable degree since the war. Besides that, hundreds of thousands of manufacturers' laborers come into the country by immigration every year, and from these two causes combined there is a labor capacity in America to produce a constantly accelerated amount of goods out of proportion to the population and greatly out of proportion to the consumption. Hence always there are two evils. At first there are too many goods made, and afterward there is a mass of idle workmen for whom there is no possible employment.

Now, there are no provisions made in any state of society for the support of either idle workmen or their families, and it is this condition which must be met, for it is driving idle men to desperation. Manufacturers suffer also from destructive competitions due to overproduction and from strikes if dissatisfied workmen. They will be benefited in common with workmen when this problem is solved. To solve it we must not destroy labor-saving tools nor stop the creation of more advanced ones, for that would reduce production by increasing costs. In reality we suffer, not from overproduction, but from underconsumption. If the ill-clad could be made more comfortable, and the hungry more properly fed, there would be but few complaints of surplus, even if all men were producers as well as consumers. It is to no one's advantage if goods are produced with the expenditure of more work than is usual or necessary.

The first thing to do would seem

to be to restrict immigration. The same instinct of self-preservation that has preserved us from Chinese cheap labor should be exercised to help us here. Next, either larger markets must continually be found in non-producing countries or the consumptions of more goods pro rata be had at home, or some means, such as the reduction of hours of labor, must continually be found, so that the whole force of American workmen will be needed constantly to manufacture American goods.

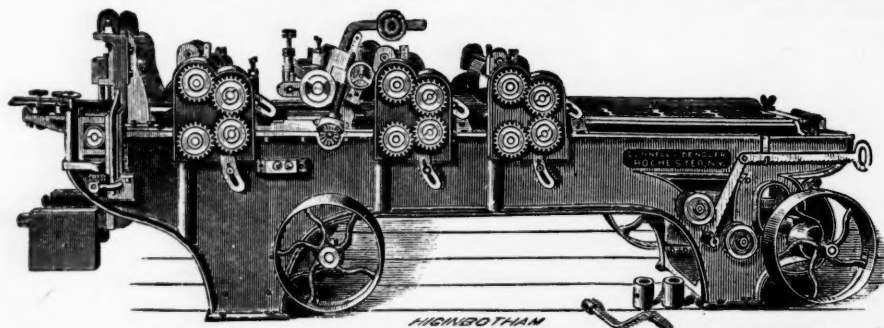
## Wagon Tires and Good Roads

Some years since I sold heavy wagons and always sold the widest tires I could induce men to buy. I tried to induce manufacturers to build wagons with the forward axle longer than the rear one for the welfare of the road and for convenience in turning, as the farther the wheel is from the body the shorter turn the wagon can make. The body can be made wider, as its sides or the rear bolster stakes might be only an inch or two from the wheels. Again, with the longer forward axle one is much more likely to clear gate posts with the long axle in front than if it were in the rear.

As further protection to highways, I would impose special taxes on two-horse wagons of \$4.00 per year if the tire is two inches or less, \$1.00 per year if three inches and no tax of four inches, and because of its value as a road roller pay the owner of a 6-inch-tire wagon \$2.00 per year.

There is an irrepressible conflict between wheels and roads, and until we can increase the resisting power of the latter we should, by broadening the tires, diminish the attacking power of the former.

# CONNELL & DENGLE.



Manufacturers of WOOD-WORKING MACHINERY. Patent improved Planers and Matchers. Pony Planers, Bevel Sawing Machines, Solid Plate and Segment Re-Saws. Box Makers' Machinery a Specialty. Cor. Mill and Furnace Streets, Rochester, N. Y.





# ATLANTA



You're about to hear a lot more about Atlanta. There's an imaginative new "Forward Atlanta" program here designed to tell the world about the city's great future. Spearheaded by dynamic leadership and guided by a thoughtful appraisal of opportunities, this is a development you'll want to follow closely.

**A REFERENCE STUDY BY**



**THE INTERNATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION  
CONWAY PUBLICATIONS, INC • 2592 APPLE VALLEY RD. • ATLANTA 19, GA.**

Already the envy of neighbors, Atlanta isn't pausing for praise. Discontent is the city's gift to the South. Not satisfied with current prospects, its leaders have just raised an unprecedented \$1.5 million to put steam behind a new drive for development. This plan will budget energies and dollars toward research, planning, and promotion of the new Atlanta of the Sixties.



**NEW  
RALLYING  
CRY:**

*"Forward Atlanta"*

Discard the old concept of the Eastern United States as an area dominated by a simple New York-Chicago axis. To get a truer picture now, you need to sketch in lines from both ends of this axis southward to form a triangle, with its apex at Atlanta. In many respects Atlanta actually outweighs much larger cities in the North because it is a major regional capital, like New York in the Northeast and Chicago in the Middle West.

If you were a nineteenth-century railroad surveyor looking for an easy route to cross the Southern Appalachians, chances are you would bypass the main mass and concentrate your search at the southern end in North Georgia, where the mountains fray out into low ridges. Unless you were exceptionally shrewd, and had already seen what was happening at the southern end of Lake Michigan, you might not suspect that a rail junction at the southern end of the Appalachians was destined for greatness.

During the 1830's, the Georgia Legislature chartered the Western and Atlantic Railroad through North Georgia to the westward-flowing Tennessee River near Chattanooga. The eastern terminus was finally fixed, one day in 1837, when the engineer in charge drove a stake in a tract of virgin forest and called the spot Terminus. A little town soon began to grow up at this spot, and its name was changed successively to Marthasville and then Atlanta — which was deemed by the Western and Atlantic's officials as being the feminine form of Atlantic.

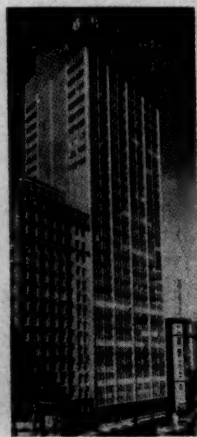
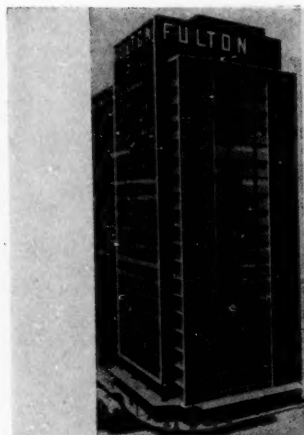
Before service could begin on the incomplete

Western and Atlantic (now part of the Louisville and Nashville system), a locomotive had to be brought overland by teams of horses from Madison, the "end of steel" 60 miles east. But by 1846 the Georgia Railroad had built westward from Madison, thus connecting with Augusta and Savannah, and the Macon and Western (now part of the Central of Georgia) had built northward from Macon. With three rail lines, Atlanta was on its way to recognition as *the* rail center of the South.

Already by 1864 Atlanta had become so important that Sherman's capture and burning of the city was the death knell of the Confederacy. We might add that it was also the beginning of the "Gone With The Wind" industry.

All told, Atlanta now has 13 rail lines of seven different systems. It is also the hub of six Interstate highway segments, six airlines and innumerable bus and truck lines, to say nothing of its extraordinary prominence for telephone communications.

It even has notions — not so absurd as they may seem — of being a waterway terminus. The Chattahoochee, which flows by the city limits, will soon be navigable to Columbus, only 107 miles to the south and 500 feet lower in elevation. There are a number of hydroelectric dams in the intervening distance, for which locks would have to be provided, and several new dams would have to be built. Since the river is an interstate stream, Federal financing would be involved.



First to rise of Atlanta's post-war crop of downtown skyscrapers was the Fulton National Bank, overlooking Five Points where the city started. Nearby is the Bank of Georgia, the city's tallest, which was completed last year. Next was Georgia Power, in the rapidly growing northern end of the business district.





## Across-the-board Growth

As the transportation center of the Southeast, Atlanta has been able to develop into the leading center of wholesale and retail trade, banking, services, government agencies and educational institutions as well. Its main downtown area now covers a square-mile area around Five Points and a major off-shoot now extends up Peachtree another mile. Within this area is one of the leading concentrations of office buildings in the country outside of New York and Chicago.

New buildings are sprouting in rapid succession. Those completed since the beginning of 1960 include the Georgia Power (23 stories), the Bank of Georgia (31 stories and the tallest in the Southeast) and the newly finished Merchandise Mart (23 stories and 23 acres of floor space — the largest in area of the new crop). Also in the downtown area, a 24-story apartment building is under construction.

Outside the downtown area, the outstanding projects include the new Atlanta Airport Terminal, a 17-story office building to go up near Lenox Square — six miles north of Five Points — and South-Lanta Square, a regional shopping center with 600,000 square feet of space, which is being built by the developers of Lenox Square.

Atlanta's big stores, such as Rich's and Davison's, and Sears Roebuck's Southeastern mail order headquarters help make the city a major retailing center with special strength in the de-

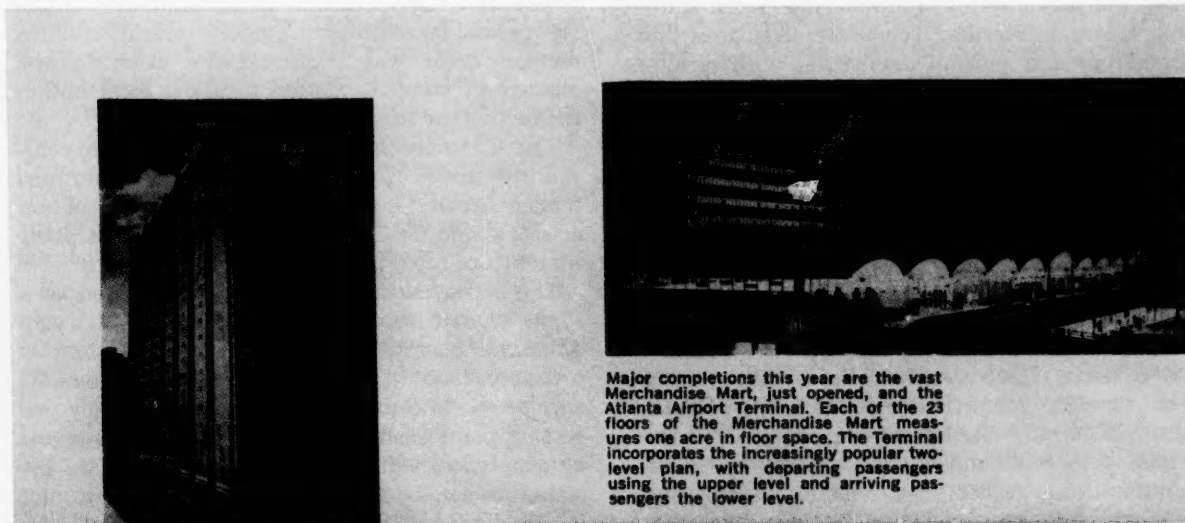
partment store sector. Fulton County's national ranking in general merchandise sales in 1959 was fifteenth, according to Sales Management's estimates, whereas for food sales it ranked forty-fifth. This high rank for general merchandise sales as compared with food sales is peculiar to regional centers with a large trading radius.

Atlanta is one of the leading participants in a fascinating game of "branchmanship", along with Dallas-Fort Worth, the Twin Cities, Denver and a select few others. Atlanta's skill at the game is reflected in the fact that no less than 354 of Fortune Magazine's list of the 500 largest American industrial corporations are represented in the metropolitan area.

The ordinary sequence is for a national firm to start out with a resident representative. Thereafter as business in the area expands, the progression is to a sales office, then a warehouse and finally a factory. The factory stage has already been reached by 101 companies and their subsidiaries, while 253 have reached the warehouse stage.

The Citizens and Southern and First National are both among the country's 100 largest banks, while the next two — Fulton National and the Trust Company of Georgia — both overtop the largest banks in some states.

The international phase of the city's economy is already far advanced, as is indicated by the fact that Atlanta has nine consulates — those of Austria, West Germany, Great Britain, Israel,



Major completions this year are the vast Merchandise Mart, just opened, and the Atlanta Airport Terminal. Each of the 23 floors of the Merchandise Mart measures one acre in floor space. The Terminal incorporates the increasingly popular two-level plan, with departing passengers using the upper level and arriving passengers the lower level.

## BUSINESS LEADERSHIP:

*Every generation manages to bring forth a particular spurt in Atlanta's growth, like that following the Cotton States Exposition of the 'Eighties. Not satisfied with Metropolitan Atlanta's increase of "only" 39.9 per cent in the last decade, business leaders are putting their shoulders to the wheel for a big new push.*



Ben S. Gilmer, who worked up in 35 years with Southern Bell from line and station installer to president, is the new president of the Atlanta Chamber of Commerce. He is not afraid to tell the city where it is lagging and to prod its citizens to new efforts.

Opie L. Shelton, bespectacled executive vice president of the Atlanta Chamber, confers with Edward D. Smith, President of the First National Bank and chairman of the "Forward Atlanta" program, on progress in the already successful effort to raise \$1.5 million. The money is to be used for research and promotion to attract further industrial employment in the area.



Italy, Mexico, Panama, Peru and Switzerland. It also has offices of nine foreign-flag airlines, including BOAC, Air France, Lufthansa and KLM.

Atlanta's own Coca-Cola and Scripto are both world-wide in scope, as foreign travelers will attest after encountering them on the banks of the Amazon, Zambesi and Mekong, perhaps delivered by an Atlanta-built Lockheed cargo plane.

The market that Atlanta serves is variously defined, but the majority of the 3,500 national concerns with Atlanta regional headquarters serve the seven states of North and South Carolina, Georgia, Florida, Tennessee, Alabama and Mississippi and part of Louisiana, with a total population of 26 million in 1960. The overnight L.C.L. delivery area by both rail and highway extends almost as far, with outer limits at Charleston, South Carolina; Greensboro, North Carolina; Johnson City, Nashville and Memphis, Tennessee; Jackson, Mississippi; New Orleans, Mobile, Tampa and Daytona.

## Responsible Men

Ever since Reconstruction days, Atlanta has been strongly identified with the New South. Henry W. Grady challenged the city — and the region — to build up a new economy based on manufacturing rather than remain an agrarian backwater, and his famous description of a South-

ern farmer's funeral where the South's only contribution was the corpse is now cited as a means of measuring the great progress of the region since his time.

The city is a forum where widely divergent views are expressed without fear and accorded an intelligent hearing. It has maintained its equilibrium during recent periods of racial tension and has led the way toward orderly progress in the solution of social problems that are by no means confined to the South.

The Atlanta Chamber of Commerce's forthright stand on maintaining public education without any break was a major factor in this year's passage of state legislation to allow local option in meeting the school integration situation.

The Chamber is also taking the lead in community action for more expressways, an extended urban renewal program, the construction of a new auditorium and a stadium, and for plans for a future rapid transit system.

The active consideration now being given to a rapid transit system is indicative of the way Atlantans operate. Knowing that by the time — probably 1980 — when they reach 2 million, it will be too late to start in on a system, they are getting plans ready so that the city's growth can be adapted to a future system and the actual installation can be accomplished with as little dislocation as possible. Considering how well the

## CIVIC LEADERSHIP:

*Public affairs in Atlanta are not reserved for solution by a few paternalistic leaders but are participated in by all elements of the community; decisions once made command broad-based community support. Best evidence of the character and ability of Atlanta's civic leadership is the manner in which they handled the tradition-shattering integration of the city's public schools in late August. The calm atmosphere of law and order brought congratulations from President Kennedy and very probably set a pattern which other southern cities will henceforth follow.*



No small part of Atlanta's excellent reputation nationwide is traceable to its mayor, William B. Hartsfield, whose 23 years in office saw the metropolitan population more than double. He is particularly associated with the new airport, with honesty in government and with maintenance of good racial relations.



Dr. Rufus E. Clement, President of Atlanta University, has served for seven years on the Board of Education as a distinguished citizen and not as a representative of the Negro community, having been overwhelmingly elected in a city-wide election with far more whites than negroes voting.

city has been working out its requirements for industrial land, in advance of need, it would be hazardous to bet against a transit system for Atlanta.

## High but near Water

Atlanta actually sits astride the divide between Gulf and Atlantic drainage, a distinction it shares with Chicago and Akron. Many of the major roads and rail lines of the surrounding area, including part of the famous Peachtree Street, follow the main divide or subsidiary divides. The main part of town is just over 1000 feet in elevation and elsewhere in the metropolitan area it ranges from 690 feet along the Chattahoochee to 1686 feet on top of Stone Mountain and 1809 feet on top of Kennesaw Mountain, the most prominent features in the Atlanta landscape. The city is actually higher than any other city as large or larger in the country except mile-high Denver.

Since you can figure that the temperature of any point drops one degree below the sea level values for each 300 feet in elevation, Atlanta has a blessed advantage of at least three degrees off the expected summer maxima experienced by lowland points in the South, and on the whole is well satisfied with its bargain, even if it means somewhat nipplier temperatures on the golf course in winter.

Since 1900, the January mean has been 43.8 degrees and the July mean 78.7 degrees, with an annual rainfall averaging 48.2 inches, with a slight maximum in March and minimum in October. This year, the temperature did not reach 90 degrees in Atlanta until July 28, long after most Northern cities had reached the high nineties, but not many Atlantans discarded their air-conditioners on the assumption that such good fortune would continue indefinitely.

The nearby Chattahoochee is dammed 35 miles above the city at Buford to create Lake Lanier, one of the two large water playgrounds close at hand, the other being Lake Allatoona on the Etowah River, about 30 miles away. Lake Lanier guarantees the stability of the city's water supply and prevents floods.

The Piedmont area in which Atlanta is located was formerly given over largely to cotton and corn farmed in small holdings, many of them by tenant farmers and sharecroppers. In recent decades, a marked trend toward dairying, beef cattle, and chickens raised for broilers has set in, and holdings have increased in size as much of the rural population has migrated to the cities.

The cities around Atlanta are growing, too, notably Columbus, Macon, Athens and Augusta, so that the city is in no danger of absorbing its own hinterland and becoming top-heavy.

Because of its transportation connections, the



## ATLANTA

city is a convenient collecting point for raw and semi-finished materials over a wide area, such as textiles from the Carolinas, steel and coal from Alabama, pulp and paper from the coastal mills, cement from local limestone, kaolin from mid-Georgia, and food, synthetic fibers, cotton and tobacco from all over the Southeast.

Since the city is not actually in the mountains, there are no major topographic barriers to its growth and the built-up area has spread out ten miles or more in nearly all directions from Five Points — the traditional heart of the city, at the intersection of Peachtree, Edgewood, Decatur, Whitehall and Marietta. There are some notable projections, such as that including Smyrna and Marietta to the northwest, where Lockheed's plant is located, that to the south along the Griffin road and around the Atlanta General Depot, and that to the northeast as far as the Buick-Oldsmobile-Pontiac plant.

Because of these projections and the odd shapes of the counties in the area, the Atlanta Standard Metropolitan Area of 1,724 square miles, which coincides with the territory covered by the Metropolitan Planning Commission, includes no less than five counties. At least two others may soon qualify for inclusion, chiefly on the basis of employment of their residents at points within the existing limits of the area. The present make-up of the metropolitan area is as follows:

	Population	
	1950	1960
Fulton (includes most of the city and also East Point, Hapeville and most of College Park) . . .	473,572	556,326
DeKalb (includes part of Atlanta and also Decatur, North Atlanta, Chamblee and Doraville) . . .	136,395	256,782
Cobb (includes Marietta and Smyrna) . . . . .	61,830	114,174
Clayton (includes Forest Park, Jonesboro and part of College Park) . . . . .	22,872	46,365
Gwinnett (includes Lawrenceville and Buford) . . .	32,320	43,541
Total, Atlanta Standard Metropolitan Area . . . .	726,989	1,017,188

Note that the largest numerical increase during the decade came in DeKalb County and that Clayton County showed the fastest rate of increase — more than 100 per cent. Most of the business establishments and factories are in Fulton County; the other counties are primarily residential, although Lockheed is in Cobb. For this reason the other counties, notably DeKalb, are busily engaged in making room for industry within their bounds to broaden their tax bases.

Atlanta's own population went up from 331,314 in 1950 to 487,455 last year, a large annexation of territory to the west and north figuring in the increase. Other cities of 20,000 or more in the five counties are East Point, 35,633; Marietta, 25,565; College Park, 23,469; and Decatur, 22,026. A large share of the population is in unincorporated suburbs such as Sandy Springs and the north central part of DeKalb County.

During the 'Fifties the population of the metropolitan area had a way of outpacing forecasts, and many people are skeptical that it will stay within the limits of the 1,400,000 figure calculated

### Editor's Note: A PLUG FOR ATLANTA FROM ONE SMALL LOCAL INDUSTRY

Without doubt, the most difficult area about which to write objectively is the one in which you live. For this reason, we at ID have waited a long time before doing a study of Atlanta. We have deliberately chosen to cover some 100 other areas before giving our view of our headquarters city.

Now, we believe the time is ripe to tell the Atlanta story. The city is very obviously in the midst of a new spiral of growth. There is a striking new airport terminal, a huge new merchandise mart, plus several impressive new downtown skyscrapers. Moreover, the local development forces have been mobilized in an aggressive program which compares favorably with anything we have seen.

Our own experience has been that Atlanta is an excellent location from which to operate a national and international business. There is no longer a regional atmosphere here. Our small staff of 25 has origins in New York, Minnesota, Missouri, Indiana, and elsewhere. That accent you hear on our phone is a secretary who came recently from England. Another is a Canadian. The man who did most of

the work on the Atlanta report, Frank Stedman, came to Atlanta last year via Wisconsin, Maine, Harvard, Europe, and Washington.

Actually, we're located in suburban Atlanta, about halfway between the \$18 million Lenox Square shopping center and the big Peachtree Industrial District. Both our office and our home are situated in DeKalb, fastest-growing county in the metropolitan area.



Our humble abode. This is ID's office, thrice expanded by addition of wings and a second floor. Next year we plan a new building in which we'll try to do a better job of anticipating growth.

We have good facilities, and strong institutions. Generally, our voters have selected capable men — Claghorns aren't popular in this area. Bond issues for improvements are approved consistently. There is an open-mindedness on national issues that would surprise many from outside. (DeKalb voted Republican in the last Presidential race.)

Like you in your home town, we try to be good citizens here. We've served as chairman of the county planning commission and over a period of years have seen a very fine program emerge. More recently, we've served as chairman of a legislative commission set up to study urban problems. We believe that most of these problems, which are common to every large center, are being met intelligently and forcefully.

In short, we like Atlanta very much. While we intend to continue our policy of reporting all areas impartially, we are happy to take this opportunity to wish Ed Smith, Opie Shelton, and other "Forward Atlanta" leaders the very best of success in their new efforts.

—H.M.C.



for 1970 by the Metropolitan Population Study Committee.

The significance of reaching a population of one million in its metropolitan area — the first and only Southeastern city to do so — was not lost on Atlanta citizens, and the Journal-Constitution published a special edition to celebrate the occasion.

Miami is breathing hard on Atlanta's neck and may well pass it in population, but this presents no serious threat to Atlanta's continued leadership of the Southeast because of the great contrast in the economic structure of the two cities, Atlanta being much the more diversified. In fact, the city welcomes added growth in both Florida and in the Southwest as a further boost in the City's centrality, since Atlanta lies almost at the intersection of the New York-New Orleans and Chicago-Miami axes.

### Built by Railroads

Atlanta is both a rail terminal point and a through point on main lines. Of the 31 arrivals and 31 departures every day at the city's two main passenger stations — Atlanta Terminal and Union Passenger Station — 14 of each are on the Southern, 5 on the Seaboard, 4 on the Louisville and Nashville, 3 on the Central of Georgia, 2 each on the Atlanta and West Point and the Georgia

Railroad and 1 on the Atlantic Coast Line.

The Southern has two main lines through Atlanta — one from Washington to New Orleans and the other from Cincinnati and Louisville to Florida. The Seaboard also has a main line from Richmond through Atlanta to Birmingham. The Louisville and Nashville has service via Chattanooga to Nashville and thereafter to either Louisville or Evansville; it also has service to Knoxville, the Kentucky coal fields and Cincinnati.

The Atlanta and West Point provides a direct route southwest to Montgomery and the Gulf Coast. The Central of Georgia runs to Macon and Savannah and connects via branches with many other cities in the state. The Atlantic Coast Line leads southward through western Georgia to connect with lines in Florida. The Georgia Railroad runs eastward to Augusta and Savannah.

Unofficial estimates of car loadings run to more than 440,000 cars annually. Freight handling facilities are impressive, and Atlanta is a major package freight center, with 250 cars originated daily.

Trucking in and out of Atlanta is growing to massive proportions, with 70 fixed-route lines offering daily service.

When the Interstate Highway System is completed, routes will intersect in Atlanta to give the city six outlets — Route 85 northeast and southwest, Route 75 northwest and southeast and

### Where from Here?

Atlanta's economy has already reached a mature stage, wherein all the major segments of manufacturing, trade and services are heavily represented and many of the minor gaps filled in. The city can now provide the manpower to operate and the market to consume almost any product that comes to mind.

Not content to let nature take its course, and wait for manufacturers with sales outlets to see the need for a warehouse, and those with warehouses to come to the conclusion that an assembly plant is needed, Atlanta is launching another "Forward Atlanta" comparable to the one of the 'Twenties that speeded up the pace of the city's growth.

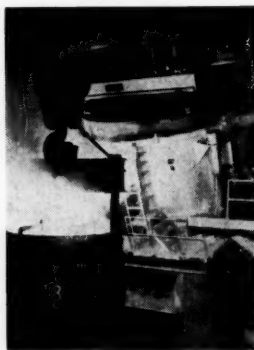
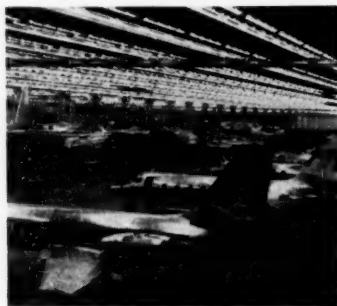
The likelihood is that the best opportunities will be found by those manufacturers who move quickly before the rush is on. This is especially true for those manufacturers of industrial machinery and fabricated metal goods which are increasingly in demand in the South as the transformation from agricultural to industrial proceeds.

Consumer industries are already here in force and can be expected to expand as the occasion demands. The pace is fast in Atlanta — don't let the magnolias fool you.



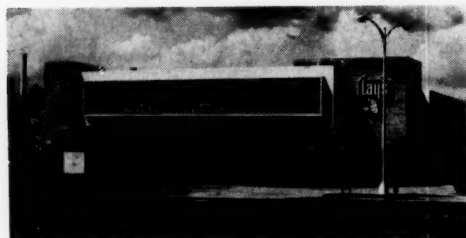
Tracks and platforms of both Atlanta stations — Union Station in the foreground and Terminal Station in the left background — fan out under the Spring Street viaduct. Other viaducts are under construction over the tracks to open up more traffic lanes into the downtown area. From these stations, through trains run to New York and Chicago and to all parts of the South.

Lockheed's huge plant at Marietta is humming with activity as a new contract for jet transports gets underway to boost our military mobility. Meanwhile, work continues on Jet-stars, the company's major invasion of the company aircraft field. At Dawsonville, just outside the metropolitan area, Lockheed is up to its ears in nuclear research.



Electric furnaces holding 90 tons of molten steel and rolling mills where speeding strips of white-hot metal are twirled around by men with long tongs are also part of the Atlanta scene. Atlantic Steel's plant gives the city a heavy industrial base extending back more than half a century.

Lay's potato chip plant, recently merged with Fritos, is one of the ornaments of Peachtree Industrial Boulevard, which is lined with landscaped plants and warehouses bearing some of the most distinguished corporate names in the country.



Route 20 east and west. In addition, 11 Federal highways enter the city, as well as a number of important state highways. Construction on the interstate system has gone farthest toward the northeast — about 30 miles, and a 20-mile stretch is partly open east of the City. Federal highway 41 is four lanes wide as far south as Griffin and northward to beyond Cartersville.

Construction has also started on a circumferential highway that will provide a by-pass to the heavily built-up area and will serve a number of industrial districts.

### Non-stop to 18 Large Cities

Air travel promises to be as great a factor in the future growth of Atlanta as rail traffic has been in the past. As both the largest and most central city in the Southeast, Atlanta has an enormous advantage in the jet age, since the speed and size of jets discourage short hops and tend to concentrate traffic in large regional centers. Atlanta already has non-stop jet flights to New York, Detroit, Chicago, Los Angeles, Dallas, Houston, New Orleans and Miami.

Atlanta ranks tenth or better among large cities in all four indices of air traffic reported recently by the Federal Aviation Agency; it is *fifth* in departures, seventh in tons of air mail, ninth in tons of air cargo and tenth in number of passen-

gers. In this last category it outranks such large cities as Philadelphia, Pittsburgh and Cleveland.

The new \$20 million terminal building has been open and admired for only a few months but the city is already on the look-out for a site for a new airport with room for a two-mile runway to accommodate intercontinental jets.

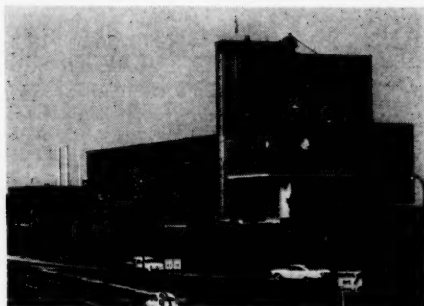
Delta, which is headquartered in Atlanta, and Eastern vie for the greatest share of the traffic, but a good deal is left over for United — new in the area since its merger with Capital — and for TWA, Northwest, and Southern. Southern is also Atlanta-based and reaches 54 cities in the Southeast.

One-line transcontinental service without a change of planes came with the recent award to Delta of the Atlanta-Texas-California route.

A particularly interesting feature of Atlanta air service is the great number of connecting flights, especially during the noon hour when the field is reportedly the busiest in the world.

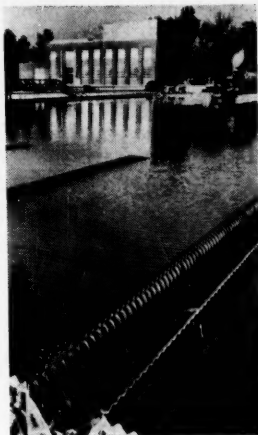
The military air field of the area is Dobbins Air Force Base, next door to Lockheed in Marietta. Five other air fields in the area provide havens for private aircraft, including the Fulton County Airport, which has more takeoffs and landings than Atlanta Airport, and Peachtree-DeKalb, where ID's own Cessna lives.

Atlanta is also the intersecting point for two

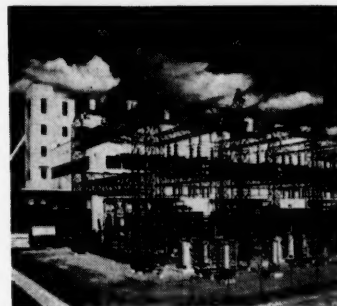


Atlanta's South Expressway leading out through Clayton County toward Griffin is another favorite location of impressive new plants. Guess again if you thought this was an opera house... it's Carling's new brewery. A big food and beverage industry has helped to attract plants making paper, glass and metal containers.

"Out of the hills of Habersham, into the valleys of Hall," tumbles the Chattahoochee, Sidney Lanier's river. Atlanta has put it to work to feed a water supply system which includes this modern treatment plant and which has a present maximum capacity of 120 million gallons a day.



Yates plant of the Georgia Power Company, the largest in the state, is 30 miles south of the city near Newnan. Its capacity is 500,000 kilowatts, and a plant of equal size is taking shape just outside the city, scheduled for completion in 1964.



pipelines bringing in refined petroleum products. The older of the two is the 8-inch Southeastern Pipe Line, which starts at Port St. Joe on the Gulf Coast of northwestern Florida; tank farms of distributing companies served by it are in the Chattahoochee section of Atlanta proper. After World War II the Plantation Pipe Line, which originates in Louisiana, and includes 18-inch sections, was built; tankage served by it at Doraville in DeKalb County totals more than 1.7 million barrels.

#### KW, BTU, Gal. per Day

Atlanta is the headquarters and the major consuming point of Georgia Power, the largest of the four companies making up the Southern Company, the leading privately owned electric utility in the South.

Of Georgia Power's 21 hydro and 7 thermal plants, three are near Atlanta. Currently the largest plant of the system is the Yates thermal plant on the Chattahoochee near Newnan, which has a generating capacity of 500,000 kilowatts. Also on the river across from Atlanta is the Atkinson thermal plant of 240,000 kilowatts and alongside it is rising the McDonough plant, with two 250,000-kilowatt units scheduled for completion in 1963 and 1964, respectively. A little way further up stream is a small hydro plant at Morgan Falls.

Natural gas is furnished by Atlanta Gas Light, which receives its supply from Southern Natural Gas and Transcontinental Gas Pipeline, and which can furnish gas as cheaply as 2.76 cents a therm (comparable to 4.2 cents a gallon for No. 6 fuel oil or \$6.90 per ton of coal). The company has a plant south of the city where five large refrigerated tanks store liquid propane for use during winter peaks of gas consumption. The propane is mixed with air before being fed into the system to maintain the proper BTU level.

Atlanta consumes an average of 74 million gallons of water from the Chattahoochee every day. The maximum capacity of the Water Department's system is 120 million gallons a day; it serves most of Fulton County. Last year a new unit — the Chattahoochee Water Treatment Plant — added 20 million gallons to the supply.

DeKalb and Cobb counties both have their own water systems drawing from the Chattahoochee. The DeKalb system has a maximum capacity of 50 million gallons and an average daily consumption of 30 million gallons.

Sewerage systems, mainly Atlanta's own, serve most of the industrial sites and are being extended to serve others. There are treatment plants on the Chattahoochee, on the headwaters of the Flint, and on the Yellow River, a headstream of the Ocmulgee River.

## Research Pool

Atlanta's cultural leadership in the Southeast has come about naturally, in response to the needs of its citizens and the benefactions of its philanthropists. There is very little of the self-consciously arty and pseudo-intellectual and the beatniks have made very little headway.

The colleges and universities in the area include Georgia Tech and Georgia State College — both state-supported — and Emory, Oglethorpe, Agnes Scott and the four components of Atlanta University — all privately supported or denominational.

Georgia Tech, proud as it is of its "Rambling Wrecks", keeps on at its main job, which is providing a scientific and technical education comparable to the best in the country. Its graduates have been described as the city's most important export. In the year ending with June 1960, 1002 bachelors' degrees were conferred, 146 masters' degrees and 12 Ph. D's; the number of graduate students is rising and is now nearly one-tenth of the total daytime enrollment of 6700.

Georgia Tech has several important adjuncts that greatly increase its service to the community and to industry in particular. Nearly 5000 are enrolled in its evening school and another 2800 in Southern Technical Institute, which is operated

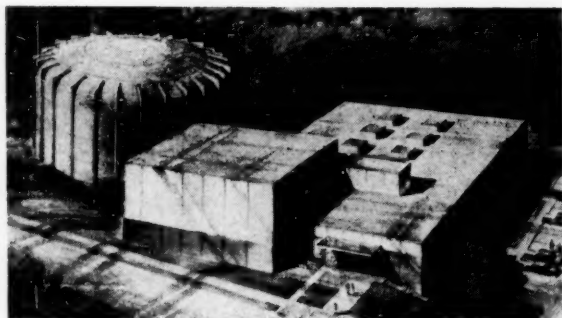
under Tech's Engineering Extension Division and has a new campus at Marietta. The Engineering Experimental Station performs a great deal of research for industries in the state and region, and is planning a new two-unit permanent research building.

Emory, as the leading liberal arts institution in the city, has benefitted repeatedly from donations of the Candler and from Robert W. Woodruff, the present head of Coca-Cola. Its medical college and associated center are among the most outstanding in the South.

The Atlanta University Center, an assemblage of six colleges, is one of the world's leading institutions for Negroes and has attracted distinguished faculties. Dr. Rufus E. Clement, a recognized civic leader and on the Atlanta Board of Education since 1954, is Atlanta University's president.

Georgia State College is rapidly outgrowing its status as a school of business administration to become a full-scale university. Meanwhile Oglethorpe is gaining recognition as a liberal arts school with high standards, and Agnes Scott retains its position as a leading Southern women's college.

Inter-college cooperation in courses, library facilities, public seminars and research projects results in a pooling of talent for the common benefit of all.



Under construction now on the Georgia Tech campus is the Nuclear Research Center complete with reactor. Highly enriched plates of an aluminum-uranium alloy will be used as fuel and heavy water will be used for moderating and cooling. (Left)

Hurt Park, opposite the auditorium, is a stone's throw from Five Points and a favorite place for lunch-hour strolls. The auditorium is one of the largest in the South, but is already considered inadequate for the size of meetings Atlanta can now attract, and a strong movement has developed to build a new and larger one. (Upper Right)

Light and shade, floral displays and whimsical sculptured figures blend to divert shoppers along the mall at Lenox Square, one of the country's most distinguished regional shopping centers. Rich's, Davison's and most other large downtown stores have branches here and parking areas are so extensive that conspicuous markers are needed to guide the bewildered back to their cars. (Lower Right)

A little apart from the downtown area rises the Grady Memorial Hospital, jointly maintained by Atlanta and Fulton County. Along with Emory's School of Medicine and various other hospitals, Grady contributes to Atlanta's reputation as a leading medical center. (Far Right)



Atlanta's public library leads the entire South in number of volumes and in circulation and is on its way to correcting a disparity often noticed between Southern and Northern cities.

### Met Spends A Week

Atlanta's cultural and social seasons reach a joint climax each spring with the week-long visit of the Metropolitan Opera, wherein the local taste is not content with *Carmen* and *Aida* but insists on less frequently performed works as well.

The city is a favorite stopping place for Broadway road shows and symphonies and art exhibits on tour, but its residents also insist on developing their own talents by means of the Atlanta Symphony, Theater Atlanta, the Atlanta Civic Ballet and the Opera Arts Association. The High Museum of Art and the annual exhibits of local artists in Piedmont Park offer still other avenues of expression and appreciation.

It would not be far off the mark, however, to pick residential Atlanta as the chief work of art. Mile after mile of streets in the favored sections of Buckhead, Sandy Springs and Decatur are lined with imposing houses with grounds that are an especial glory in the spring when the dogwood and azaleas are at their peak. Although Colonial styles predominate, contemporary buildings are increasingly common. From the air in the

daytime, large sections of it hardly seem to be built up, so continuous is the tree cover, but at night the vastness of the city is most impressive from the air.

The city is also justly famous for its churches, and its pulpits boast some of the most distinguished names in the country. The skyline is punctuated by spires worthy of the Wren churches in London, and a massive new Gothic cathedral is being built on Peachtree by the Episcopalians.

Not least among the city's claims to fame are its newspapers, the morning *Constitution* and the evening *Journal*. Formerly rivals, they are now jointly owned by the Cox interests and use the same plant but preserve independent editorial policies. As the inheritor of the Grady tradition, the *Constitution* continues as the voice — and conscience — of the New South, as readers of Ralph McGill will recognize. The *Journal* is widely recognized for its local service projects.

Atlanta is a major sports center, with a special affinity for golf, as befits Bobby Jones' home town, and for football and basketball because of Georgia Tech. Less obviously, it is a water sports center because of the large expanse of new reservoirs within a 100-mile radius. The North Georgia and Carolina mountains are close enough for weekend jaunts, especially during rhododendron season in June and when the leaves turn in the fall.



## REPRESENTATIVE MANUFACTURERS IN ATLANTA AREA EMPLOYING 250 OR MORE

### Food and kindred products

Coca-Cola Company  
Atlanta Coca-Cola Bottling  
Swift  
Kraft Foods  
Norris Candy  
H. W. Lay  
Gordon Foods  
National Biscuit  
Southern Bakeries  
Colonial Stores (baked goods)  
A. & P. (baked goods)  
American Bakeries  
Miss Georgia Dairies

### Textiles

Exposition Cotton Mills  
(J. P. Stevens)  
Fulton Industries  
Scottdale Mills  
Whittier Mills  
Coats & Clark  
Eastman Cotton Mills  
Piedmont Mills

### Apparel

Lovable Brassiere  
Cluett-Peabody

Empire Manufacturing  
Roswell Company  
Holeproof Hosiery  
Owenby Manufacturing

### Wood products

Southern Wood Preserving  
Williams Brothers Lumber

### Furniture

Simmons  
Southern Spring Bed

### Paper

Mead Packaging  
Montag Brothers  
Virginia-Carolina Chemical  
(paper bags)

### Printing and publishing

Atlanta Newspapers, Inc.  
Retail Credit Company  
Ruralist Press

### Leather goods

General Shoe  
Bona Allen

### Stone-clay-glass

Owens-Illinois Glass  
Knox Glass

### Primary metals

Atlantic Steel

### Fabricated metals

Calvert Iron Works  
American Art Metal  
Grinnell Corporation  
Southern Wire & Iron Works

### Non-electric machinery

Warren Company

### Electrical machinery

Westinghouse

### Transportation equipment

General Motors  
Chevrolet  
Fisher Body  
Buick-Oldsmobile-Pontiac  
Ford Motor  
Lockheed Aircraft  
Delta Air Lines (aircraft modification)

### Miscellaneous manufacturers

Adgif  
Scripto  
Atlanta Metallic Casket  
Rushton Company  
Crown Cork & Seal

Local interests are hard at it building up support for both a stadium and a coliseum and the day of big-time professional sports may not be far off. Atlanta is currently seeking AAA status in baseball and a spot in one of the major football leagues.

### 81,550 Employed in Industry

The list of large manufacturers elsewhere in this report hardly does justice to the full scope of Atlanta's manufacturing. For one thing, it does not indicate the large number of printing, publishing and advertising establishments that are a necessary adjunct of an important regional capital. The Atlanta Chamber recognized this in devoting the third issue of its slick-paper magazine to the graphic arts, which rank after transportation, food and apparel as the fourth largest source of manufacturing employment.

Unlike some cities engaged primarily in market-oriented consumer goods, Atlanta has its own steel mill, which uses scrap, Alabama pig iron and coal from the Southern Appalachian fields to produce a wide range of products. Atlantic Steel started over fifty years ago to make steel bands for cotton bales.

Some of the leading plants under construction or currently expanding in Atlanta are Knox Glass, Mead Packaging, Southern Bakeries, Qual-

ity Lithographing division of Riegel Paper, St. Joe Paper, Deran Confectionery and Lloyd A. Fry Roofing, all with plants of 100,000 square feet or larger. New warehouses of this size are being put up by Kraft Foods, Mead-Dillard and Gold Bond Stamps.

Lockheed has been the leading industrial employer in the area since its establishment in the early post-war period. It occupies the plant built during the war for Bell Aircraft and vacated when that company closed down its Georgia operations at the end of the war. Lockheed has never dominated the local scene to the extent that has prevailed in some large aircraft centers. Employment is currently below 20,000 but is due for another spurt as Lockheed tools up for its current large contract involving jet transports.

Lockheed's Georgia operations also include missiles research in Atlanta and nuclear research at Dawsonville, in the mountains 65 miles north.

Atlanta's government activities involve employment of 53,000, nearly two-thirds as many as in manufacturing. The Federal Government accounts for 19,000 of these, and every department of the government and a great many independent agencies are represented.

Some of the leading installations include the Third Army headquarters at Fort McPherson, the Atlanta General Depot, Dobbins Air Force Base at Marietta, the Communicable Disease Center

## METROPOLITAN ATLANTA REFERENCE LIST

**Atlanta Chamber of Commerce**, 1301 Commerce Building, Atlanta 3, Georgia. Atlanta, official monthly magazine of the Chamber, first published May, 1961, 50-100 pp., in color, 35 cents a copy.

**Publications and releases of the Industrial Bureau:**  
**Manufacturing and Assembly Plants in Metropolitan Atlanta**, 1958-59 edition, 67 pp. \$1.00.  
**Planned Industrial Districts in Metropolitan Atlanta**, listing of 28 districts, indicating developer, acreage, type of occupancy allowed, 1961, 7 pp.  
**Manufacturers' Agents in the Atlanta, Georgia, Area**, 1961, 11 pp.  
**Shopping Centers in Metropolitan Atlanta**, 1960, 7 pp.

**Atlanta Region Metropolitan Planning Commission**, 500 Glenn Building, Atlanta 3, Georgia.  
**Population** — Housing as of April 1, 1960, 36 pp., \$1.50.  
**Atlanta Region Comprehensive Plan — Rapid Transit**, 1961, 32 pp., \$2.50.  
**Crosstown and By-Pass Expressways**, 1959, 40 pp.

**City of Atlanta, Department of Water Works**, 102 City Hall, Atlanta 3, Georgia. Annual Report, 1960, 20 pp.

**Georgia Power Company**, 270 Peachtree Street, N.W., Atlanta 3, Georgia. Annual Report, 1960, 36 pp., map of generating primary transmission system.

**Georgia Institute of Technology, Engineering Experiment Station, Industrial Development Branch**, Atlanta 13, Georgia.  
**Industrial Development in Georgia since 1947 — Progress, Problems, Goals**, 65 pp. with appendices; bibliography lists feasibility reports on 30 or more different types of industries presently undeveloped or poorly developed in the state.

**Georgia State Employment Service**, 61 Trinity Ave., S.W., Atlanta 3, Georgia. Atlanta Area Labor Market Trends, monthly, 5 pp.

**Georgia State College of Business Administration, Bureau of Business Research**, 33 Gilmer Street, S.E., Atlanta 3, Georgia.  
**Atlanta Economic Review**, monthly, 24-plus pp., carries time series of 17 economic indices for Atlanta and surrounding area.

**DeKalb County Chamber of Commerce, Industrial Committee of 100**, P. O. Box 648, Decatur, Georgia.

Metropolitan Atlanta, Georgia — DeKalb County, 16 pp. mimeograph, revised periodically.

Georgia Power's Eugene Yates points out a likely spot in one of the city's new industrial districts to Paul Miller, manager of the Atlanta Chamber's Industrial Bureau. Keeping track of industrial land involves an intimate knowledge of planning agency recommendations, recent utility extensions and the spread of the expressway system as well as other factors.



in Decatur, the Sixth Federal Reserve Bank and the Federal Aviation Agency, which is being augmented by the return to Atlanta from Fort Worth of the Southern regional office.

Federal offices are widely scattered through the city, but the state, county and city offices are centered in the southern part of the business district near the Capitol.

### ID Specialists

Atlanta is naturally the leading Southern center for information needed by industries investigating sites for new plants or expansions. The city's own Chamber of Commerce, directed by Opie Shelton with Paul W. Miller as head of the Industrial Bureau, includes all five metropolitan counties within its scope. Georgia Power serves the greater part of the state and maintains an alert Industrial Development Division of which Eugene A. Yates, Jr., is manager.

Others with state-wide contacts are Jack Minter, Director of the Georgia Department of Commerce; Dr. Kenneth Wagner of the Engineering Experiment Station at Georgia Tech; Penn W. Worden, Jr., Industrial Agent of the Georgia State Chamber of Commerce; and representatives of the five leading banks.

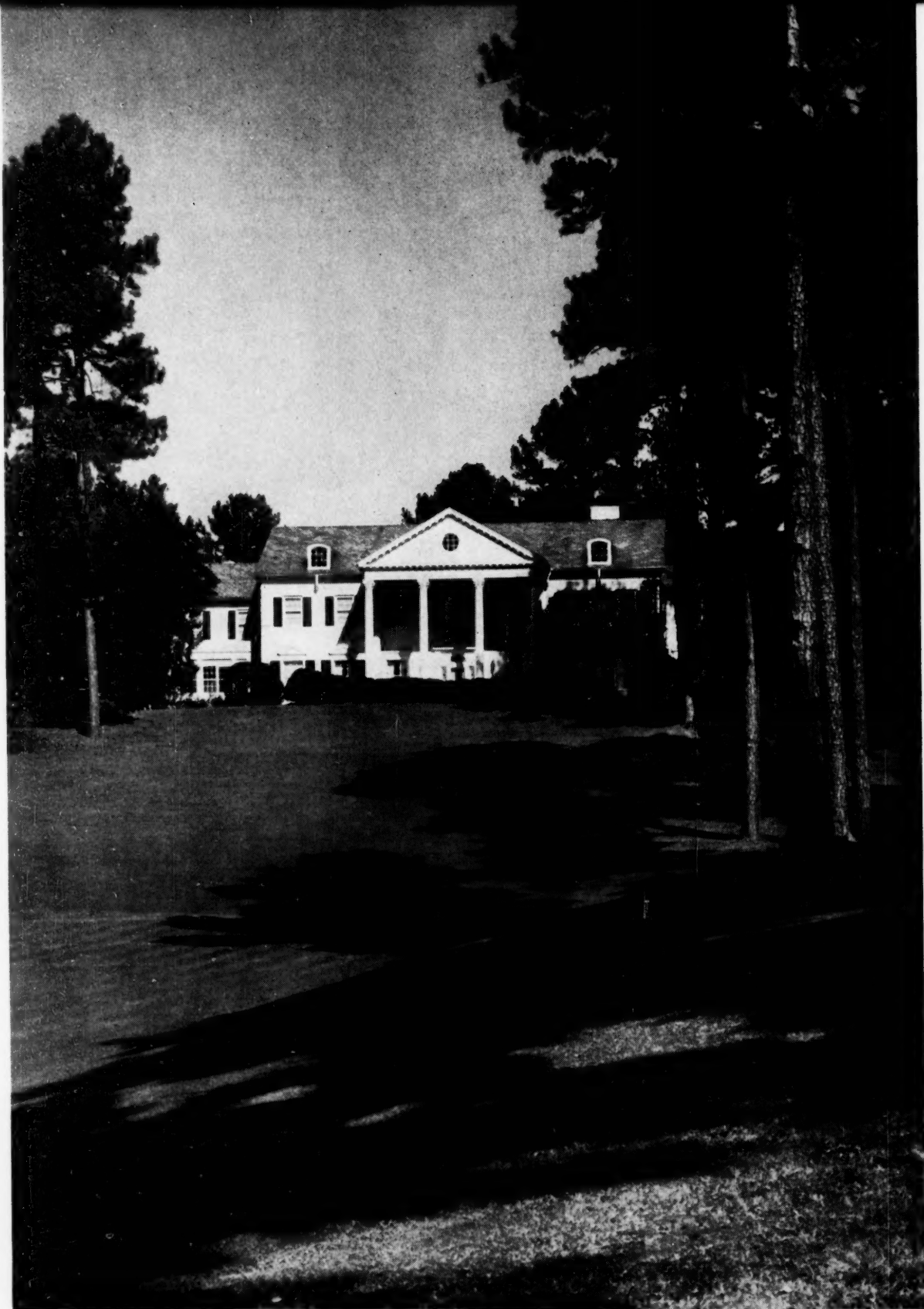
Atlanta is one of the show-cases for industrial parks in the country. The cooperation of its

municipal planners with industrial realtors has brought about a radial pattern of in-town, inner suburban and outer suburban parks where lots of all sizes and with varying degrees of restrictiveness as to land use are available to the site-seeker.

Prestige sites on expressways and other major thoroughfares have attracted many outstanding new plants and warehouses with facades and landscaping meeting the highest standards and with all loading and storage out of sight from the street. The coming peripheral highway and the planned extensions of the expressways will link up many of the existing and projected industrial areas and improve access to agricultural areas where large acreages can be purchased by companies for their own development.

Details on communities within the metropolitan area are given in the audits of the International Community Audit Registry for Atlanta, College Park, DeKalb County and Fairburn; one on Sugar Hill is in process. ID covered all of Georgia in the September 1960 issue.

This reference report of industrial location factors in the Atlanta metropolitan area was prepared under the auspices of the Atlanta Chamber of Commerce. Reprints may be obtained from Paul W. Miller, Manager, Industrial Bureau, Atlanta Chamber of Commerce, 1301 Commerce Building, Atlanta 3, Georgia.

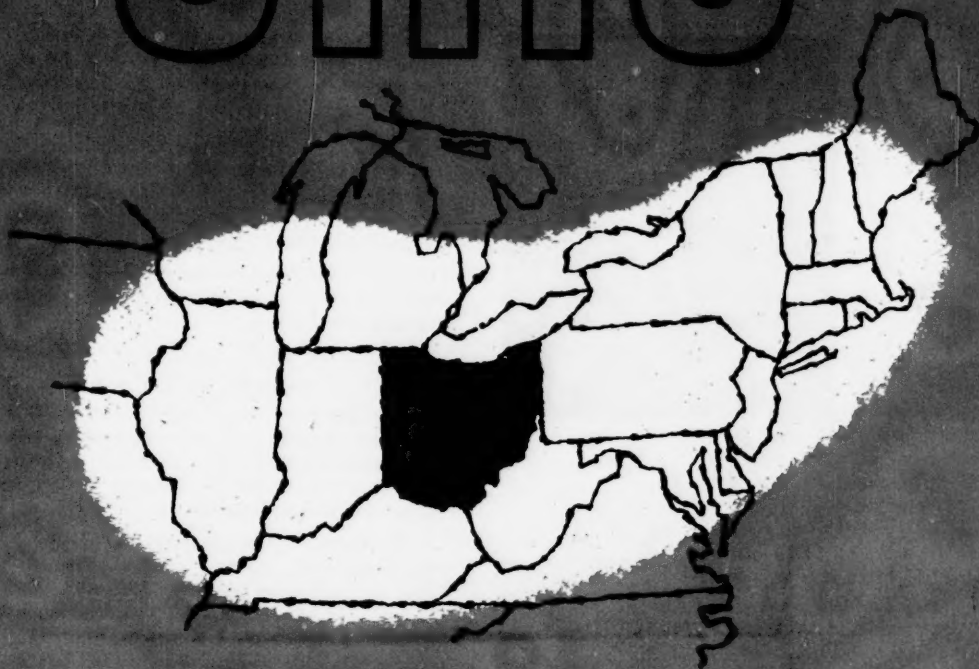


Residential Atlanta has districts that rival Westchester County and the Main Line for beauty of architecture and landscaping. Pillared Colonials such as the Nunnally Mansion compete with chateaux and cantilevered contemporary styles, and the tall pines are varied with standard hardwoods, hardy subtropicals and more dogwood than you have ever seen before.



Almost every nationwide survey of growth finds Ohio among the leaders in actual magnitude of expansion. Last year some 800 new plants were listed in the state. In one recent six year period Ohio got one dollar of every ten spent in the U.S. for new plant facilities. Here's a new resume of the factors contributing to their phenomenal success.

# OHIO



**A REFERENCE STUDY BY**



THE INTERNATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION  
CONWAY PUBLICATIONS, INC. • 300 APPLE VALLEY RD. • ATLANTA 10, GA.

# Industrial OHIO:



Geography from the beginning of time destined Ohio to have a large population. Nearness to abundant supplies of iron and coal and position between the Seaway and the Ohio River opposite three of the natural gateways from the East are factors that insure the steady industrial growth of the State.

Ohio's 41,222 square miles of diversified topography are crisscrossed by thousands of miles of railroads and highways over which the finest transportation equipment moves between well-equipped terminals and ports.

Ohio's chief industrial resource is the diversified skill of its working population—its machine operators, artisans, technicians, engineers and managers.

To expanding industry looking for new locations, Ohio provides an abundance of raw materials, electricity and water.

As research and analysis are essential to the economic growth of our state, a highly specialized department has been established to ferret out pertinent information and assist plants interested in locating or expanding in Ohio. That agency is the Ohio Department of Industrial and Economic Development.

Ohio has many other advantages that have earned it the title of "The Growth State" and there is plenty of room for more industrial plants and more human resources.

MICHAEL V. DISALLE  
GOVERNOR OF OHIO

It's not any coincidence when one state consistently ranks near the top in industrial development. Ohio's growth is the logical result of a happy combination of factors, including: location right in the middle of the world's biggest manufacturing belt — many times larger than the Ruhr; one-day accessibility to more than half of the nation's consumers; impressive transport, water, and energy resources; and a great concentration of highly-skilled industrial workers.

# Always A Leader

By Bernard A. McIlhenny

Ravenna, Ohio, population 10,918, has been chosen as the site of the Flintkote Company's new \$10 million asbestos-cement pressure pipe plant. The 186,000 square foot factory will be constructed on a 100-acre site just south of the city limits. Ravenna Area Development Committee Chairman Ben Maidenberger cites the key factors that caused Flintkote to choose Ravenna: "We have a raw water supply. The new plant needs about two million gallons a day, which we can supply with plenty left over. Raw materials for production are readily available. The asbestos comes from Canada, but the silica and cement come from right here in Ohio. The third factor was Ohio's excellent highways system, making all the markets very close to Ravenna."

This is typical of factors which have been stated so many times about Ohio that they seem trite: but they remain so very true. Ohio has many of the best locations in the nation for industry. It offers vast quantities of water, skilled workers, transportation unlimited, low-cost power, and so much of so many of

the things industry wants and needs. Superlatives just seem to fit Ohio!

Let's take a closer look at Ohio and see why this growth is taking place. Its strategic location is probably the key factor. Midway between the nation's two largest markets and with Lake Erie on the north and the Ohio River on the south, Ohio is within 500 miles of more than half the total U. S. population and within the same distance of more than half the Canadian population. New factories find — often within the state — both markets for their output and suppliers for their needs. A recent survey by a national business magazine showed 35 percent of industrial leaders picked Ohio as being within the area they would choose for new plant sites.

The high concentration of industry already in Ohio — there are more than 12,000 industries there now — offers nearby supplies for most processes along with a wide market for specialized industrial products. Ohio is the second largest steel-producing state and leads in the production of rubber products,

screw-machine products, clay products, automobile presses and dies, electrical machinery, and even nuts and bolts! It ranks second in auto assembly.

## Led Nation's Westward Growth

Ohio's location has been important since times when Indians, British, French and Americans fought for its markets and natural resources. It lay in the direct path of westward expansion in the eighteenth and nineteenth centuries and profited from the development of early rail and water transportation. Today Ohio is served by 43 railroads and is crossed by most of the major east-west rail lines. Twelve major domestic and foreign airlines serve the 20 larger airports, and business flying uses 163 other licensed airports. Burke Lakefront Airport, five minutes from downtown Cleveland, is a modern downtown business airport which has grown from 16,000 flights in 1950 to over 25,000 in 1960 — a 56 percent increase!

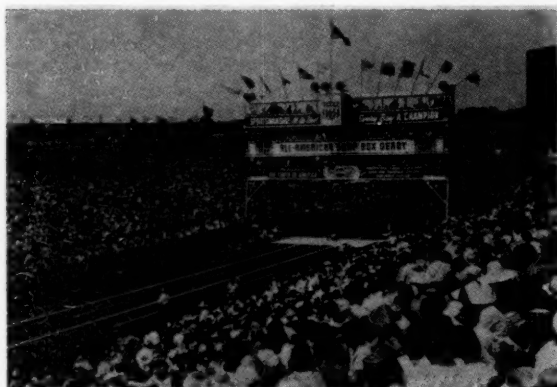
(Continued on Page 80)



Construction of modern locks and dams on the Ohio River will increase the available transportation facilities in Ohio. Tonnage on the river exceeds 80 million tons annually, with raw materials, chemicals, semi-finished and finished manufactured products supplying most of the total. Barge manufacturers have shown versatility in designing for new requirements.



Meeting the growth challenge, Ohio's fuel gas industry is increasing the existing 10,000 miles of gas transmission pipes. Marketing and distribution are familiar roles of these utilities, but Ohio also produces gas: last year about 38 billion cubic feet from 7,200 producing wells.



The All-American Soap Box Derby draws thousands of spectators and dozens of hopeful participants to Akron annually from all fifty states and several foreign countries. Other attractions include the many beautiful state parks, over 500 inland lakes, major league baseball, pro and college football, and a variety of recreational facilities in a state "as lovely as ever lay outdoors."



Port development and industrial progress go hand-in-hand. Toledo-Lucas County Port Authority's facility here includes a foreign trade zone and space waiting for industry. Seven other ports are near industrial sites where producers can be closer to world markets.



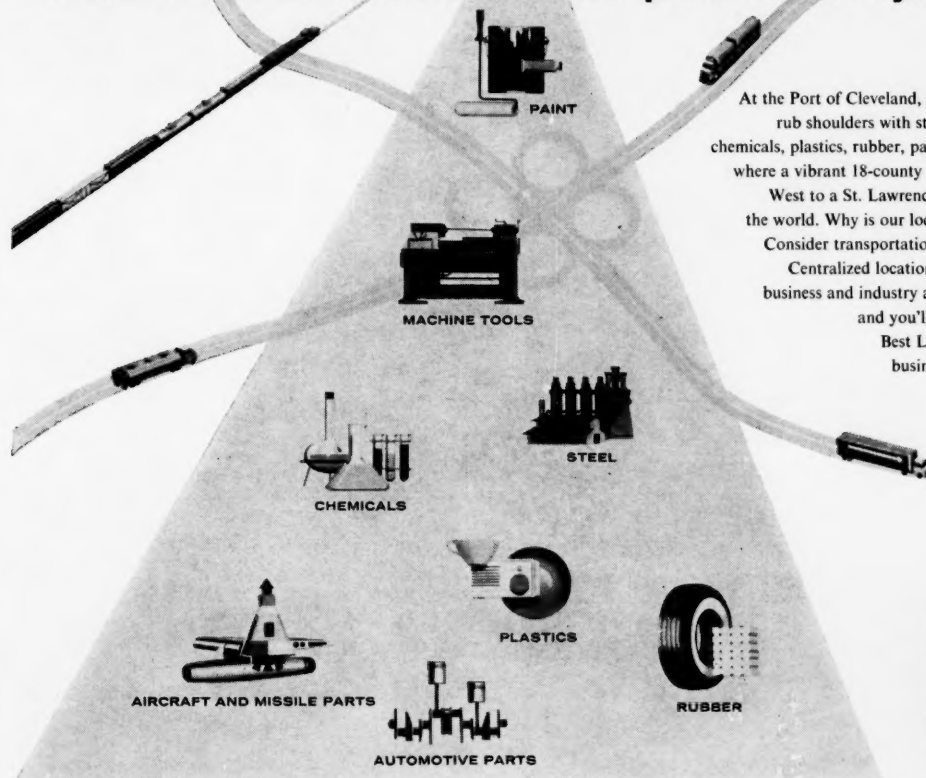
This enormous electrically-powered shovel removes huge quantities of dirt and rock overburden from coal deposits in eastern Ohio. The seemingly endless reserves have been estimated at more than 10 billion tons. Current research is upgrading coal for coking and by-products industries.





# CLEVELAND

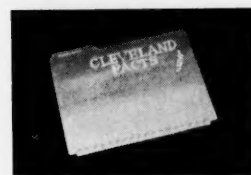
**focal point of two dynamic triangles**



At the Port of Cleveland, sailors from all parts of the globe rub shoulders with steelmen and truckers, with men in chemicals, plastics, rubber, paint. Cleveland is the unique point where a vibrant 18-county triangle funnels the entire Middle West to a St. Lawrence Seaway triangle and markets of the world. Why is our location superior for your business? Consider transportation. Utilities. Water supply. Labor.

Centralized location. Banking facilities. Consider the business and industry already here. Consider everything, and you'll understand why Cleveland is the Best Location in the Nation... for your business, your employees, your family.

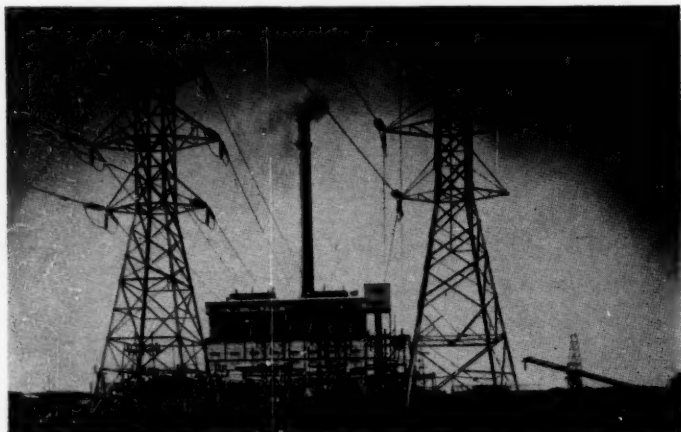
For a detailed picture of the Best Location in the Nation, write on your company letterhead for the new 144-page booklet... "CLEVELAND FACTS"



*Industrial Development  
Committee*

**CLEVELAND  
CHAMBER OF COMMERCE**

Department "ID"  
Cleveland 14, Ohio



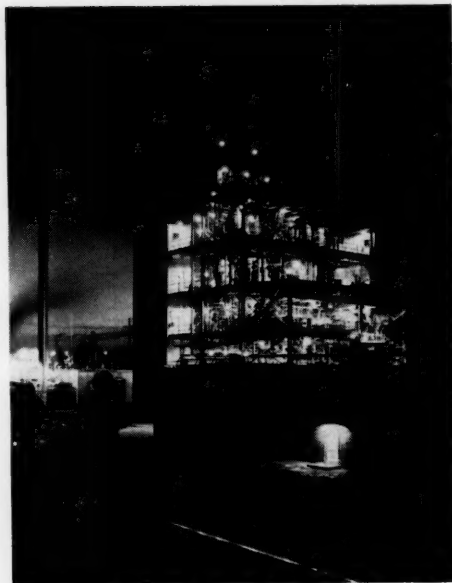
Major plant generators of electricity in Ohio are steam turbine powered, using readily available Ohio coal. More than a billion dollars is slated for expansion of the electric power producing capacity of Ohio within the next five years. One-sixth of the total electrical energy is produced by industry for its own use.



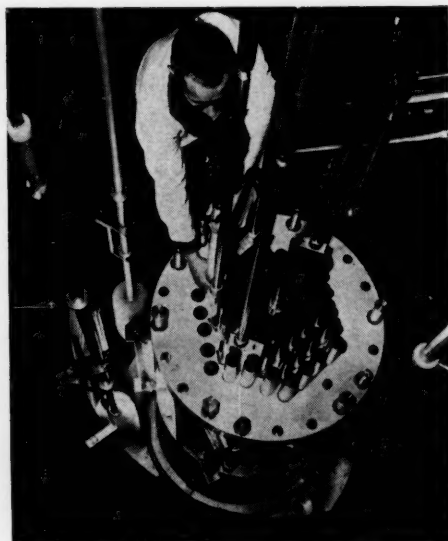
Ohio Stadium is the home of the Buckeyes of Ohio State University. Within Ohio there are more educational institutions than any European nation. Management development training at college level offered by many institutions serves as refresher courses for leaders of industry, while specialized vocational training schools supplement the on-the-job training of production and service personnel.



Three north-south and two east-west national interstate highways are under construction in Ohio. More than 100,000 miles of hard-surfaced roads connect every city of 5,000 or larger population. The Ohio Turnpike links adjoining states with the principal New York-Chicago route.



Last month more than 100 new plants located in Ohio. And these newcomers find markets for their products and raw materials for their needs in or near Ohio. Chemical plants, such as the Circleville "Mylar" plant of Du Pont, tap Ohio's vast supplies of coal, underground water as well as river and lake sources.



Research, typified by this scene at Batelle Memorial Institute, plays an increasingly important part in development in Ohio. Economic research joins with product research to stimulate growth in many industries. Nearly 400 research institutions in Ohio employ some 27,000 persons exploring new ideas and developing tomorrow's industrial products.

RESEARCH CHARTS A

# FOR PROGRESS

IN CENTRAL AND SOUTHERN OHIO

To obtain an authoritative, scientific analysis of its 23-county service area, Columbus and Southern Ohio Electric Company has engaged Battelle Memorial Institute for a 2-year study.

Research teams from Battelle, noted private industrial research organization, will evaluate the area's resources . . . catalogue all activity in manufacturing, mining, transportation and related fields . . . analyze the impact which future developments will have on the area . . . pin-points the advantages which the area possesses for industry, with a scientific evaluation of these advantages

From this project will come facts — unbiased and accurate — which will allow site-seekers to save weeks and months of valuable time.

**Contact**

Willis C. Welch, Director of Area Development, Columbus and Southern Ohio Electric Company, Columbus, Ohio

(Continued from Page 75)

Six of the new interstate highways pass through Ohio. This is one of the few states where every city is served by a hard-surfaced highway. Ohio's two great water routes, the Lakes and the Ohio River, are carrying more than one billion short tons of commerce annually. The 10,000-plus rail miles serving Ohio's relatively small area (34th in size) give it a rail density index (rail miles per square mile of area) very near the top.

### Fifth Free Trade Zone

Eight ports on Lake Erie are gaining in importance daily. The most significant development here was the creation last year of the fifth Foreign Trade Zone at Toledo. This is the only one in Ohio and the only one so far on the Great Lakes. Here, in a 5½-acre site which is being expanded, imports can wait duty-free while being processed, counted, graded or sorted, cleaned, manufactured and manipulated in many other ways, and no duty is paid until they are brought into the United States. As described by Congressman Emanuel Celler, a leader in initiating trade zone legislation, a foreign trade zone is an area where a shipper can "put down his load, catch his breath and decide what to do next".

In other words, this is an extra-

territorial place (like the U. N. Headquarters in New York City) that is "not in the U. S." as far as customs is concerned until the imports are actually needed. This brings a variety of benefits. Imported raw materials may be stock-piled duty-free and withdrawn as needed. One unique benefit of a foreign trade zone is that domestically produced goods usually subject to state or federal taxes, such as tobacco, may be shipped in bond to the trade zone and left there indefinitely without payment of taxes. If the goods are exported the taxes are never paid. If they are to be sold in the U. S. payment of these taxes is deferred until actual removal from the zone into the U. S.

This new Foreign Trade Zone is located within about 85 acres of property owned by the Toledo-Lucas County Port Authority very near the mouth of the Maumee River. Presently the authority is increasing the water depth here to 27 feet and the concrete pier is being lengthened from 800 to almost 3,000 feet.

### Heavy Loads On Ohio River

The Ohio River carries the bulk of heavy tonnage for the state, consistently leading in the past two decades both the Great Lakes and the Panama Canal. Presently the

river is undergoing a face-lifting of about \$852 million for construction of 14 new lock and dam units. The importance of the Ohio River is due to its nearness to the nation's major coal deposits, its all-weather route to the south central petroleum reserves via the Mississippi, and the industrial growth of the area bordering the river.

The federal government realized this long ago and completed early efforts at canalization in 1929. Now, in place of the existing 46 dams, there will be only 19, each with a large "pool" or lake deep enough and long enough to reduce the lockage time substantially. Older one-way locks will give way to new longer two-way twin locks permitting tows of modern size. Reportedly a large tow in transit over the entire system will be able to save two or three days time en route.

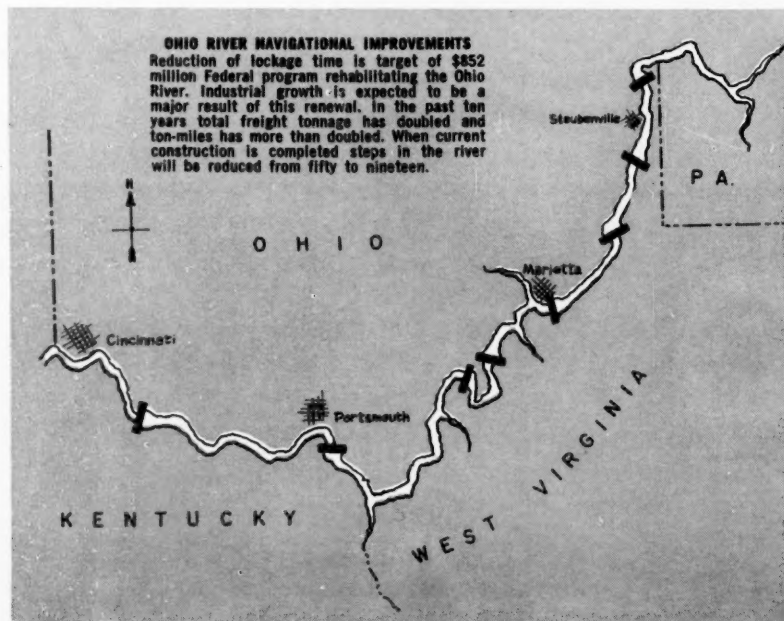
The pools themselves, some as long as 100 miles, will offer fine recreational advantages and chances for recreation-based business growth. It is interesting to compare the Ohio River modernization with the Federal interstate highway program: both cost about \$1 million per mile! Much versatility is shown by barge builders who constantly come up with equipment designed to haul new commodities. Rail car, acids, automobiles, molten asphalt and pressurized gases are hauled on special-purpose barges.

### Transportation — Centered Zone

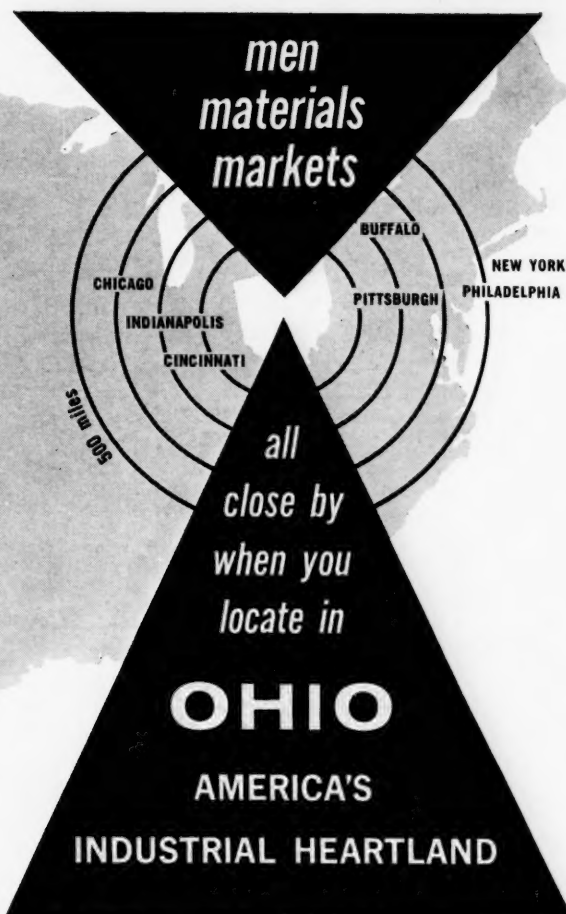
The "Cleveland Corridor" (I.D., January, 1959) in northeast Ohio, an area about 60 miles long and 20 miles wide, offers thousands of acres of prime industrial sites bounded by Lake Erie on one side and transcontinental highways and four major trunk-line railroads on the other. More than 150 truck lines also serve this area. Cleveland Electric Illuminating' Richard L. DeChant, who has helped Ford, General Electric, Union Carbide and others select the Cleveland area, is typical of competent development experts who stand ready to help you select a site in this advantageous area.

### Ohio Is Power-Full!

Ohio is the number one electricity-using state, and has a productive capacity of over 11 million kilo-







For detailed and confidential information on plant site locations in Ohio, write or phone M. E. White, Manager, Industrial Sales, Ohio Fuel Gas Company, 99 North Front Street, Columbus 15, Ohio.

Ohio provides a large and skilled labor pool for new industries. The industrial population is well distributed across the state, and it is primarily in the productive age group between 18 and 54. The available labor pool is one of the reasons the petrochemical industry is expanding in Ohio.

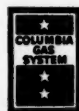
The above map shows that most of the nations major suppliers and major markets are within a 500 mile radius of Ohio. Good transportation facilities make them easily accessible. Major railroads and truck lines; good highways; and two important waterways, the Ohio River and the St. Lawrence Seaway, aid in getting products to market. Ohio ranks third in the number of public airports. The proximity to suppliers and markets is one of the reasons

so many steel plants are located in Ohio.

You will find Natural Gas and other utilities in abundant supply. The Ohio Fuel Gas Company and the Ohio Valley Gas Company are a part of the Columbia Gas System—the largest in the world. They serve 56 of Ohio's 88 counties with low cost gas service. Extensive underground storage facilities warehouse gas to insure an adequate year 'round supply. A plentiful supply of gas, water and power is one of the reasons for the expansion of the aluminum industry in Ohio.

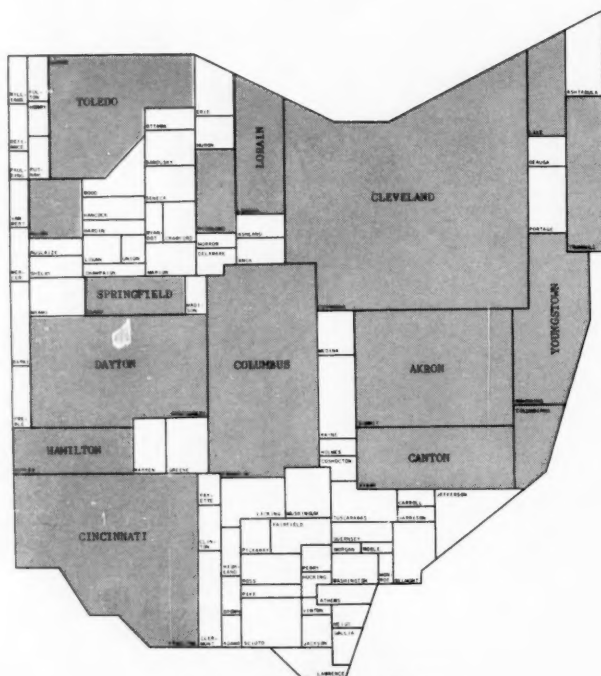
Ohio is a good place to live. The climate is stimulating. Schools, churches and recreational facilities are excellent. You'll like the tax system because corporation taxes are below average and real estate taxes are relatively low.

**THE OHIO FUEL GAS COMPANY**



**THE OHIO VALLEY GAS COMPANY**

*Part of the Columbia Gas System Supplying an abundance of Natural Gas to Ohio Industry.*



LEADING MARKET AREAS IN OHIO

(Proportioned by county population. 16 counties over 100,000 in color, with principal cities.)

watts. Plans for expansion in the next five years call for one billion dollars more to be spent on power production. Most of the transcontinental pipelines go through Ohio, and thousands of miles of pipeline within the state carry petroleum products as well as hydrogen, chlorine, acetylene, and even powdered coal!

The largest basic source of power in Ohio is coal. Known reserves exceed 10 billion tons. At the present rate of consumption this would last the entire nation *more than 20 years!* Natural gas and oil are also available in Ohio. The largest oil refining center between the Atlantic and the Middle West is at Toledo, where Gulf, Standard, Pure and Sun operate refineries.

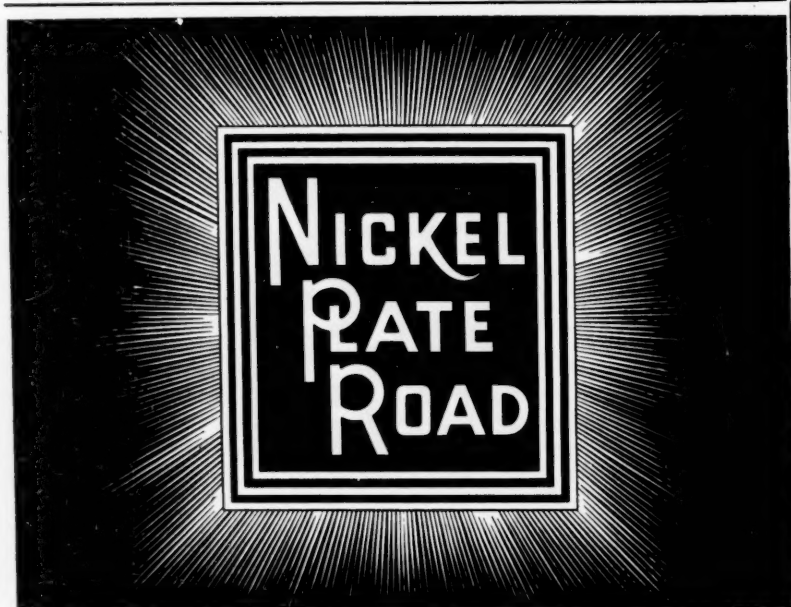
#### Your Markets Are Here

Ohio has sixteen marketing areas of over a hundred thousand population. Per capita income consistently tops the national average by about 10 per cent, and Toledo has the highest per capita income in the country. Columbus has been called a key test-market area by market research authorities. With about one per cent of the nation's land area, Ohio has more than five per cent of its population. This is an "industrially sophisticated" labor force which has experiences industry demands.

A recent survey showed more than 1500 skilled trades are practiced in Ohio. This often means that new plants can start with trained personnel and can tap a wide market of talents as they expand. Organizations such as the Ohio Apprenticeship Council work with educational institutions to provide trained employees.

#### Almost One New Plant Daily

In the time it took you to read this far, new plant construction and expansion has progressed in value more than \$7000! Yes, as reported to *Industrial Development's* exclusive New Plant Reporting department, more than 220 new plants or expansions valued at over \$90 million have been announced so far this year in Ohio. Some of the larger ones are Air Products' \$10 million oxygen facility at Cleveland; General Electric's \$8 million tungsten-molybdenum plant at Euclid; the \$10 million Fisher Body stamp-



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Offices in principal cities

## OHIO

ings factory at Hamilton; and the Brush Beryllium plant (\$7 million) at Elmore.

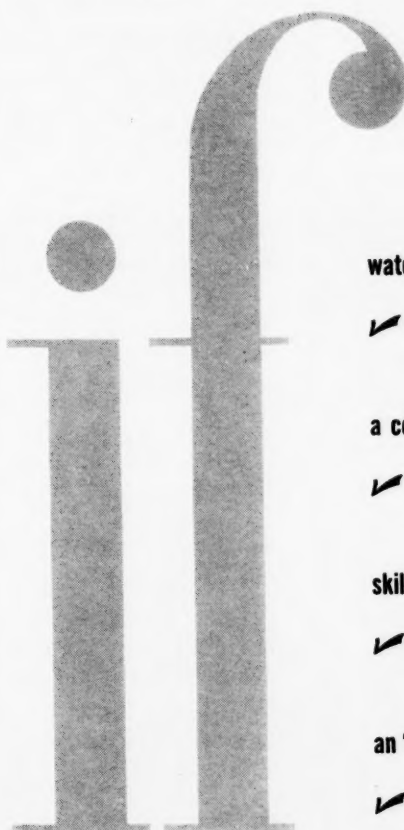
Tax-wise, Ohio operates all its state government functions out of current revenues or past surpluses. Per capita annual tax collection of \$90.46 is well below the national average of \$101.72. There is no state corporation income tax and no state income tax. Real estate valuation is made at local and county levels. Average overall state real estate tax in 1958 was 3 per cent of the assessed valuation.

### State Leads in Education

Higher education is close to Ohioans: in fact, 97 percent of the people are within *twenty-five miles* of a college or university! Today there are 64 institutions of higher learning in Ohio, and a new state Interim Commission on Education Beyond High School is studying needs for more educational facilities to take care of the growth in demand for higher learning. One factor that has reduced the state's expense of higher education is that there are only six-tax supported colleges and universities. Private colleges have thus prevented the high tax burdens undergone by many other states for higher education.

However, this has not caused any loss of quality as Antioch, Case Institute, Denison, Kenyon, Oberlin and Ohio Wesleyan have all made well-known contributions to the education of Ohioans. Cooperative education, the learn-while-you-earn idea, got its start at the University of Cincinnati. There are three medical schools and nine law colleges. The famous educator Horace Mann helped Antioch College begin and was its first president. At Hiram College students follow a unique plan of studying only one course at a time!

Research departments of many schools offer services to business and industry. Ohio offers a large number of cities where industry and personnel can benefit from the atmosphere and tone of the college community. Lee L. Davis, vice-president for area development of the American Electric Power System says "Good educational resources are a prime factor in deciding location of plants in today's severe competition".



water is a factor,

✓ check Toledo, Ohio

a central location is essential,

✓ check Toledo, Ohio

skilled labor is a requisite,

✓ check Toledo, Ohio

an "Inland Seaport" is important,

✓ check Toledo, Ohio

Toledo has a Lake Erie water supply source and 120 million gallons per day capacity plant.

Toledo is the center of a 500 mile area comprising 60% of the U.S. population.

Toledo has a basic pool of trained manpower.

Toledo has excellent port facilities for overseas shipments and is the only Foreign Trade Zone on the Great Lakes.

Toledo has diversified industries, including food processing, glass and ceramics, paper and plastics, chemical processing, building and stone products, primary metals, machinery, electric products and instruments.

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310 Safety Bldg.

Toledo, Ohio

Louis M. Thomson, Jr., Director

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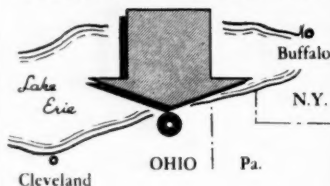
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## OHIO

### OHIO'S LEADING INDUSTRIES

Listing of industries having manufacturing divisions in Ohio.

\* ASTERISK indicates industry is home-based in Ohio.

#### FOOD & KINDRED PRODUCTS

American Bakeries  
Borden  
Campbell Soup  
Carnation  
Coca-Cola  
Continental Baking  
General Foods  
Heinz (H. J.)  
Hormel  
Hunt Foods  
Hygrade Food Products  
Libby, McNeill & Libby  
Mayer (Oscar)  
National Biscuit  
National Dairy Products  
Pepsi-Cola  
Pet Milk  
Pillsbury  
Quaker Oats  
Ralston Purina  
Rath Packing  
Stokely-Van Camp  
Sunshine Biscuits  
Swift  
Wilson

#### LUMBER & WOOD PRODUCTS

Diamond National

#### FURNITURE & FIXTURES

American Radiator & Std. Sanitary  
Simmons Co.

#### PAPER & ALLIED PRODUCTS

\*Champion Paper  
Container Corp. of Amer.  
Crown Zellerbach  
International Paper  
Kimberly-Clark  
\*Mead Corp.  
Scott Paper  
West Virginia Pulp & Paper

#### PRINTING

\*Harris-Intertype

#### CHEMICALS & ALLIED PRODUCTS

Air Reduction  
American Cyanamid  
Archer-Daniels-Midland  
\*Diamond Alkali  
Dow  
DuPont  
\*Glidden  
\*Harshaw Chemical  
Interchemical  
Koppers  
Minn. Mining & Mfg.  
Monsanto  
Olin-Mathieson  
\*Procter & Gamble  
Rexall Drug  
\*Sherwin-Williams  
Spencer Kellogg & Sons  
Staley (A. E.) Mfg.  
Stauffer Chemical  
Union-Carbide

#### PETROLEUM REFINING

Ashland Oil  
Gulf Oil  
\*Ohio Oil  
Pure Oil  
\*Standard Oil (Ohio)  
Sun Oil

#### RUBBER

\*Clevite Corp.  
\*Dayco Corp.  
\*Firestone  
\*General Tire  
\*Goodyear  
\*Goodyear

#### STONE, CLAY & GLASS

American-Marietta  
\*Anchor-Hocking Glass  
Carborundum  
Corning Glass  
Johns-Manville  
\*Libbey-Owens-Ford Glass

#### National Gypsum

\*Owens-Corning Fiberglas  
\*Owens-Illinois Glass  
Pittsburgh Plate Glass  
U. S. Gypsum  
U. S. Pipe & Foundry

#### PRIMARY METALS

Aluminum Co. of Amer.  
\*Armco Steel  
Bridgeport Brass  
Copperweld Steel  
Crucible Steel  
Detroit Steel  
\*Eagle-Picher  
Inland Steel  
\*Interlake Iron  
Jones & Laughlin Steel  
Kaiser Aluminum  
National Lead  
National Steel  
\*Republic Steel  
Revere Copper & Brass  
U. S. Steel  
Universal-Cyclops Steel  
Wheeling Steel  
\*Youngstown Sheet & Tube

#### FABRICATED METALS

American Can  
Brunswick Corp.  
Continental Can  
Crown Cork & Seal  
Dresser Industries  
\*Eaton Manufacturing

#### MACHINERY, NON-ELECTRICAL

\*Addessograph-Multigraph  
Alco Products  
Amer. Machine & Foundry  
Babcock & Wilcox  
\*Bliss (E. W.)  
Burroughs  
\*Cincinnati Milling Machine  
Federal-Mogul-Bower Bearings  
\*Midland-Ross  
\*National Cash Register  
Oliver Corp.  
Rockwell Manufacturing  
Tecumseh Products  
Textron  
\*Timken Roller Bearing

#### ELECTRICAL MACHINERY

Avco  
\*Champion Spark Plug  
Electric Storage Battery  
General Electric  
Philco  
Radio Corp. of America  
\*Reliance Elec. & Engineering  
\*Thompson Ramo Wooldridge  
Western Electric  
Westinghouse Electric  
Whirlpool

#### TRANSPORTATION EQUIPMENT

American Brake Shoe  
Baldwin-Lima-Hamilton  
Bendix  
Borg-Warner  
Chrysler  
Curtiss-Wright  
\*Dana Corp.  
\*Electric Autolite  
Ford  
Fruehauf Trailer  
General Amer. Transportation  
General Motors  
International Harvester  
Kaiser Industries  
Mack Trucks  
North American Aviation  
Pullman  
Westinghouse Air Brake  
\*White Motor

#### INSTRUMENTS & CONTROLS

Minneapolis-Honeywell  
Rockwell-Standard



And H. V. Schmidt, Western Electric vice-president, reporting on why W-E chose Columbus for a new \$50 million plant, stated that among other factors they were also "influenced by the availability of good schools and the nearby colleges and universities".

So far more than 350 licenses for nuclear activity have been issued in Ohio by the AEC. An outstanding practical example of this is Industrial Nucleonics of Columbus, specialists in gauging and process control by nuclear devices. The Plum Brook reactor at Cleveland's Lewis Research Center will have a power output equal to 60,000 kilowatts and will investigate problems of nuclear power for air and space travel.

### Enough Water?

"Ample water!" "Unlimited water!" You've heard these phrases so often that they sound misused and overworked: except in the case of Ohio! Presently it is the second largest water user east of the Mississippi at an estimated 14 billion gallons of water per day. This is about 1500 gallons per day for every man, woman and child in the state! Ohio ranks first in water supplied by industry for its own use, currently over 11 billion gallons per day. This is about double the average for the other 49 states.

Where does all the water come from? The sources are rainfall; the Ohio River, which collects much of the rain run-off; Lake Erie, where there is more than 100,000 billion gallons; and an extensive system of cool underground rivers. The following table shows the sources of Ohio's water, by millions of gallons per day:

Source	Total	Percent
Inland Surface .....	4,945.2	42.7
Ohio River .....	3,235.8	28.0
Lake Erie .....	2,641.8	22.8
Underground .....	526.5	4.5
Other .....	222.8	2.0
	11,572.1	100.0

The saving factor, however, is that little of Ohio's total water withdrawal is consumed. Most of it returns to streams and lakes to be used again. Though demand is expected to double in the next 25 years, Ohio doesn't foresee any trouble. "Even with the anticipated increase in population", says An-

thony R. Rudnick, state water economist, "Ohio will have no water shortages due to lack of basic supply".

The creation in 1959 of a Department of Industrial and Economic Development, under the direction of Koder M. Collison, veteran industrial development leader, was a step toward centralizing the sources of information about the state. Initially, this agency made a fact-finding survey of 120 Ohio cities, and this

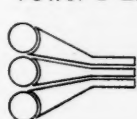
information is available to business and industry.

An invaluable contribution was the publication in 1960 of a 250-page Statistical Abstract which contains much useful data about many sides of Ohio's economy, in tabular and graph form. The department has an atomic energy coordinator, a commission on education beyond high school, and is the state's liaison agency for joint Federal-State planning.



## Yes! From Northeast Ohio's Biggest List!

Get the facts in minutes on any Northeast Ohio industrial site. Our list of over 500 sites is the largest in this area. Just pick up the phone for complete information on size, location, taxes, labor, transportation and utilities . . . confidentially and with no obligation. Write or call collect today to: Area Development Department / The East Ohio Gas Company / 1717 East Ninth Street / Cleveland 14, Ohio / Tower 1-2960.



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Inspect fully improved Dunham Industrial Park now! In Maple Heights, near downtown Cleveland. Near **everything!**

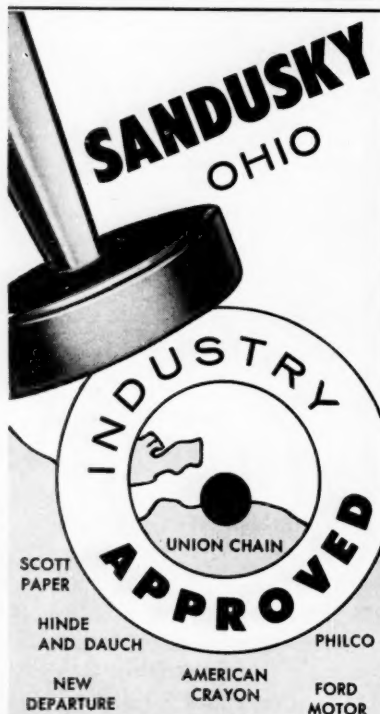
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For information on this industry approved community, send for a free copy of "The Sandusky Story", Industrial Development Department, Sandusky Area, Chamber of Commerce, Box 620 Sandusky, Ohio

## OHIO

### Research Contributes Much

One of the most significant recent contributions of an Ohio research activity was the perfection of live-virus polio vaccine by Dr. Albert B. Sabin of the University of Cincinnati. Here also a recent combination program of research and education in engineering and physics was kicked off by a generous Ford Foundation grant. At St. Vincent Hospital in Cleveland, Drs. Kay, Mendelsohn and Zimmerman have successfully demonstrated an artificial heart valve to replace those real valves damaged by rheumatic fever. And Cleveland's Dr. Willem Kolff has come up with a new simplified artificial kidney.

Such life-saving research in the medical field is matched by equal

strides forward in other fields. Agricultural research led to the world's first commercial chick hatchery in New Washington in 1897. At present there are more than 380 industrial research laboratories in Ohio, employing about 27,000 persons in various stages of research. Battelle Memorial Institute at Columbus, leader among private research firms, has made significant progress in nuclear research, metallurgy and manufacturing processes. A famous unbreakable main-spring alloy for watches was developed here. More than 3200 specialists at Battelle do research in welding processes, plant engineering, chemical processing and dozens of other fields.

Ohio is also the center of world rubber research in various labora-

### REFERENCE SOURCES FOR OHIO AND ITS COMMUNITIES

"Agriculture, Forestry and Human Resources in Southeastern Ohio," Richard J. Lund, Battelle Memorial Institute, Columbus, 1956, six pages.

"Akron's Planned Industrial Park," Industrial Development Department, Akron Canton & Youngstown Railroad, Akron 8, six pages.

"Chemical Industry Finds the Ohio Valley," O. C. Thompson, Union-Carbide Chemicals, South Charleston, West Virginia, 1958, 14 pages.

"Chemical Shore," Cleveland Electric Illuminating Co., Cleveland 1, 18 pages.

"Cleveland Corridor," Industrial Development Magazine, January 1959, pp. 17-32.

"Economic Effects of Ohio River Navigation," Joseph R. Hartley, Indiana University, Bloomington, Indiana, 1959, 132 pages. A thorough, studied and highly readable evaluation of the Ohio River's contribution to the area and national economies. Contains bibliography.

"Economic Potentialities of the Upper Ohio Valley," T. D. Best, et al., Battelle Memorial Institute, Columbus, 1955, 92 pages.

"Five Hundred Largest U.S. Industrial Corporations," Fortune, July 1961, pp. 167-186.

"Greater Ashtabula Area Industrial Sites," Industrial Development Dept., New York Central System, Cleveland 13, 88 pages. Good description of available industrial sites with maps, photos and other data.

"Importance of the Ohio River Improvement Program," Prof. Marvin J. Barloon, Ohio Valley Improvement Assoc., Cincinnati 2, 1960, 31 pages.

"Industrial Research in Cleveland-Northeast Ohio," Market Research Unit, Cleveland Electric Illuminating Co., Cleveland 1, 1958, 30 pages. Lists area research activities, comparative data and bibliography.

"Industrial Site Area Project," Maurice Page, Urban Renewal Commission, Akron 8, eight pages.

"Lifting and Leveling Employment in Ohio," William Papier, Ohio Bureau of Unemployment Compensation, Columbus 16, 1960, eight pages. Study of efforts being made to reduce cyclical and other employment variations.

"Metropolitan Area of Columbus, Ohio," Industrial Development Magazine, June 1959, pp. 17-32.

"Mineral Resources of Southeastern Ohio," R. G. Bengston, et al., Battelle Memorial Institute, Columbus, 1950, 108 pages.

"New Profile for the Ohio River," Monthly Business Review, Federal Reserve Bank, Cleveland, February 1960, pp. 2-9. Describes clearly what is being done to the River and why. Maps, graphs and other data.

"Ohio Communities which have Locally Financed Industrial Development Corpora-

tions," Albert E. Redman, Ohio Chamber of Commerce, Columbus 15, 1959, 15 pages.

"Ohio Population—Growth and Distribution," Ohio Dept. of Industrial and Economic Development, with the Dept. of Geography of Miami University, Columbus 15, 56 pages plus map. Although apparently prepared before final 1960 census results were announced, much of the data are valid and the interpretations hold true in most cases.

"Ohio River Valley," Industrial Development Magazine, July 1959, pp. 17-48.

"Ohio Valley Story," Ohio Valley Improvement Assoc., Cincinnati 2, 1957, 20 pages. Photos, maps and other data on Ohio River.

"Plum Brook Reactor Set to Operate Soon," Wilson Hirschfeld, Cleveland Plain Dealer, Cleveland, March 8, 1961. Describes new large nuclear reactor near Sandusky.

"Port of Cleveland," Cleveland Chamber of Commerce, Cleveland 14, 1958, 20 pages. Shows facilities, contains directory of port-connected businesses.

"Port of Toledo News Letter" (Special Foreign Trade Zone Edition), Toledo-Lucas County Port Authority, Toledo 4, November 1960, four pages. Clearly describes function and operation of foreign trade zone.

"Production Center for Defense," Cleveland Electric Illuminating Co., Cleveland 1, 1958, 104 pages. Detailed study of industries engaged in defense production, from the tiniest to the giants, with statistical data.

"River-Boat Revival on the Ohio," James A. Maxwell, Saturday Evening Post, March 13, 1959, pp. 24-25, 59-61.

"Statistical Abstract of Ohio—1960," John R. Ervin, et al., Dept. of Industrial and Economic Development, Columbus 15, 1960, 250 pages. Excellent source of Ohio data.

"Summary of State and Local Taxes," Ohio Dept. of Industrial and Economic Development, Columbus 15, March 1961, 17 pages.

"Survey of Wages, Policies and Benefits," Dayton Area Chamber of Commerce, Dayton 2, 1958, 80 pages.

"Tomorrow's Labor Market," William Papier, Ohio Bureau of Unemployment Compensation, Columbus 16, 1959, nine pages. Sensible description of needs Ohio will face in the immediate future.

"Transformation in the Ohio Valley," Harold Wieland, Magazine of Wall Street, June 9, 1956, pp. 339-341, 384-386.

"Water Use in Ohio," Anthony R. Rudnick, Ohio Dept. of Natural Resources, Columbus, 1959, 56 pages. A lucid story of Ohio's water wealth with supporting statistical data.

"World Trade Directory" (Special Seaway Edition), Toledo Chamber of Commerce, Toledo 4, 1959, 40 pages. Lists Toledo importers, exporters and auxiliary services.

tories in and near Akron. Newest development in this field is the two-ply automobile tire, which reportedly will run cooler, softer and will last longer than previous four- and six-ply tires. Ceramic research in Toledo and Newark has sparked the state's glass and ceramics industry. The giant air force research laboratories at Dayton help keep America ahead in aviation, and the National Aeronautics and Space Administration's Lewis Research Center in Cleveland does basic and practical research in various propulsion devices and methods.

The Mead Corporation dedicated a \$4.5 million paper and fibre research center at Chillicothe this past June. It is interesting to note that the last five presidents of the American Association for the Advancement of Science have been Ohio scientists. At Ohio State University more than \$7 million was spent last year on research — in fields ranging from apple peeling to low temperature physics. There, a special Bureau of Business Research compiles economic, business, industrial and market data useful to immediate executive decisions as well as for long-range planning.

An Engineering Experimental Station does contract research toward increased utilization of Ohio's natural resources, and a new radio telescope, one of the largest in existence to date, will let Ohio scientists listen in on the many satellites and other space objects. Food product

development, food manufacturing and engineering processes, and marketing and distribution research is done at the Agricultural Research division of Ohio State University at Wooster.

The concentration of research facilities and the number of research personnel in Ohio mean that industry has a great source of help nearby, and that there is in Ohio that desired professional and scientific "climate" welcomed by technical personnel moving into a new area.

### Utilities Expansion Investment

"Eight of the Ohio electric utility companies will build as much generating capacity in the next ten years as has been done in the last 75 years", said William H. Zimmer, president of the Ohio Electric Utility Institute. He added that more than a billion dollars will be invested in this expansion in the next five years. Adding to this will be atomic electric power from a pilot 12,500 kilowatt organic-cooled nuclear plant at Piqua which will furnish steam to the Piqua municipal generators.

This energetic growth is paralleled by the growth of city- and industry-owned power generating facilities. One-sixth of the 11 million-plus kilowatts produced in Ohio is generated by private manufacturers for their own use. Low-cost coal and plenty of water make this feasible.

## When it comes to Plant Sites...



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### ID's ANALYSTS OF GROWTH OPPORTUNITIES

ID's analysis of Ohio suggests that possibilities are especially good for new plants in the following fields:

1. Secondary chemical processing and manufacture of consumer chemical products. Raw materials from the existing highly developed chemical complexes in Ohio, plus large consumer markets favor production in this field.

2. Processing of light-metals and manufacture of products incorporating light-metals. Existing light-metal production, widely available low-cost power and more-than-enough water are important, but a ready market already in Ohio lends weight to expansion possibilities.

3. Technology-centered manufacturing. Industries requiring proximity to research centers, and highly skilled work forces would do well to consider Ohio. Such manufacturing requires heavy support industries which Ohio offers in abundance.

4. Cermet and allied quasi-metal industries. Due to rising importance both to industry and to end-product users, manufacturers should look to Ohio where specialized raw materials, water and power, and research facilities are plentiful.

A STATE  
of  
WELL-BEING...

# OHIO

offering

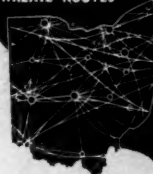
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TRANSPORTATION



WATER



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industry in  
motion discovers  
an abundance of the  
human and natural  
resources which make  
for assured success.  
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# SETTING CRITERIA IS BASIS OF FACILITY PLANNING

**"The philosophy of operation and the organization responsible for new facilities in my company is based on a simple sequence — a project moves chronologically through the planning department, the design department, and the construction department. I like to think of their functions as planning: determining what has to be done; design: how to do it; and construction: the actual doing."**

*By J. S. Matthews  
Facilities Planning, IBM*

The planning function itself is essentially a managerial function. A key to the successful performance of a manager's job is the ability to define the problem and if the manager can adequately define the problem there are others who can be found to solve it.

We've all had the experience of an individual describing to us a knotty problem he couldn't solve and by the mere attempt at describing, he has discovered the means of solution to his own problem. With the new facility problem defined, we will be able to save time by ignoring the irrelevant issues and dealing only with the pertinent aspects.

Determining the requirements for a satisfactory solution is a chore be-

*From a speech made before the Society for The Advancement of Management.)*

cause it sometimes involves subtle differences; a building requirement, as an example, might be comfort air conditioning (not 78°F. and 50% R. H. —that's a way to solve the requirement and not the requirement itself). I have a fellow in my department who is uncanny at differentiating between requirements and methods. For me, I need a rule, and a good general rule that works about 60% of the time, anyway, is that if it can be measured it's not a requirement.

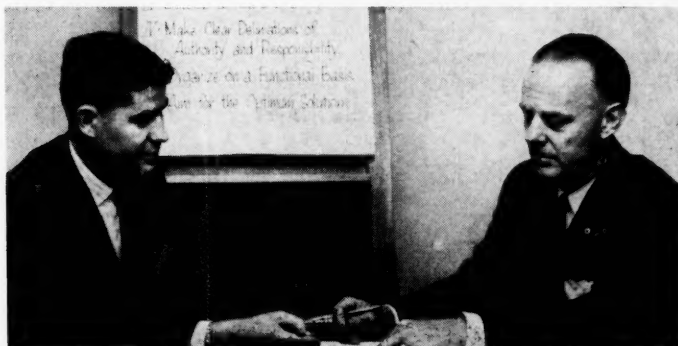
List enough basic data so that anyone reading your data can get a mental picture of the project—a feel for the job. If you're a planner or a designer, I don't believe you can take another step until you know the scope of the problem.

## SCOPE OF THE PROBLEM

Kind	Office Building
Function	Newly created S.A.M. Division Hqs.
Responsibility	Coordinate activities of 5 regional sales offices and 2 plants (Sales—N. Y., Chi., Atl., Dallas, SF) (Plants—Tulsa, Harrisonburg)
Population	500 by mid-1963; 700 by 1967 (Executives and professionals — 40% now in N.Y. area; 20-30% from other facilities; service, administrative, locally)
Size & Schedule	100,000 sq. ft. by mid-1963 140,000 sq. ft. (ult. size) by 1967
Cost Area, Quality	Economical, but not austere

With a scope in hand, other separate parts of the project can be started effectively — community selection, building, planning, scheduling and architect selection — however, the work is not yet concerned with how to do it. We are concerned with the requirements of a satisfactory solution and each step will lean heavily on the scope.

If a clear set of requirements is ever needed, it is needed for community and site selection. During the past few years my company selected communities by using seven pre-determined criteria and one special criterion peculiar to the particular job. Since no two qualified analysts could agree on the importance of any of the criteria with respect to the others, we dodged the initial steps by asking the people who would later rep-



John Matthews, (L) Manager of the Facilities Planning Department at IBM's Madison Avenue headquarters, confers with his boss, N. L. Martin, who is Director of Facilities Planning and Construction. Matthews is a West Pointer who has been with IBM in Poughkeepsie and New York for five years. His forthcoming M. B. A. degree from New York University is partly based on a thesis entitled "An Approach to Community Selection for Industry".

resent the management at the new facility to weigh mathematically the factors to be considered. Then our analysts proceeded to locate communities which best satisfied the mathematical model. Actually, I believe we were far more effective than the procedure would indicate but only because we had some capable people who were reading into the problem some of the things which were obviously needed.

#### COMMUNITY AND SITE SELECTION

1. Requirements
2. Screening Criteria of Minimum Standards
3. Selection Model—Mathematical Model

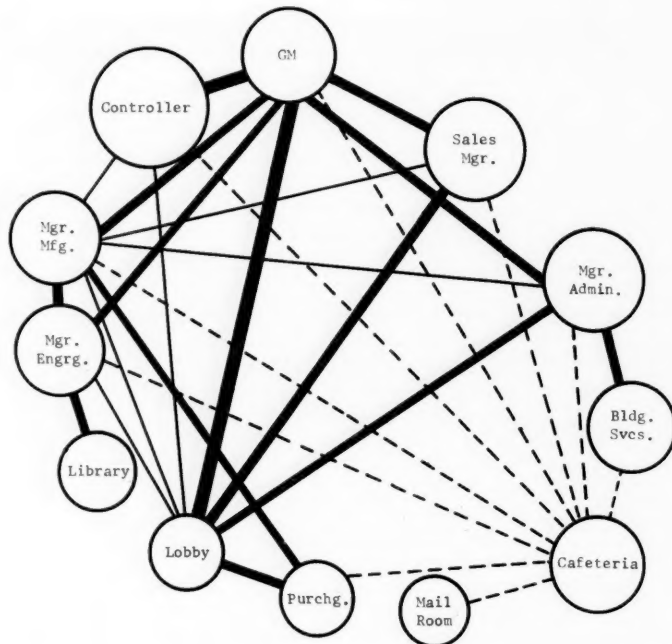
#### REQUIREMENTS

Access to and from sales offices, plants, corporate hqs.  
Community capable of accommodating facility  
Low vulnerability to attack  
Low operating cost potential

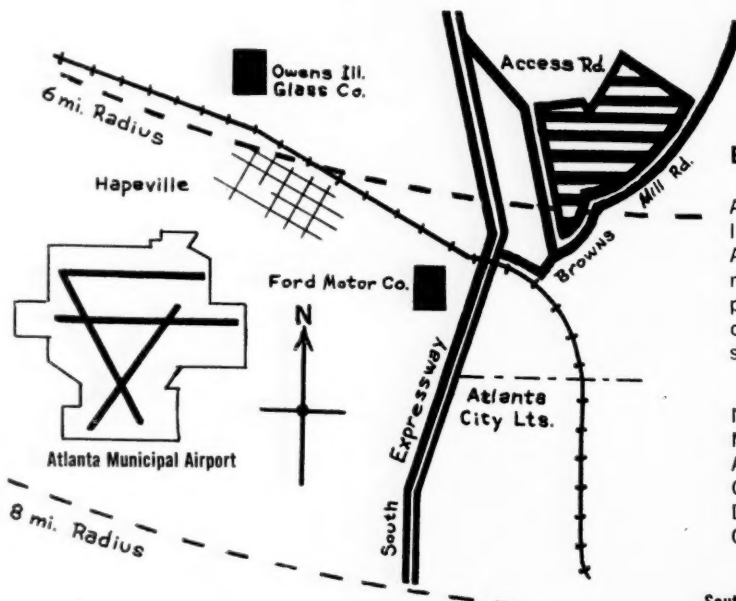
#### SCREENING CRITERIA

Midwest  
Within 20 miles of city of 100,000  
Outside prime target areas  
Within 1 hour of major airport

For the screening criteria, there is no question of how will a community measure up; the question is, does it measure up at all? We are not selecting potential communities; we are eliminating all which cannot satisfy our requirements.



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**LABOR SUPPLY AND COST • TAXES  
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FUEL • MARKETS • EXISTING BUILDINGS**

*An experienced staff with a wealth of helpful information is at your disposal to assist you in planning your plant expansion in confidence without obligation. For full information, phone or write J. S. Frost, Director of Industrial Development, 135 E. 11th Place, Chicago 5. Telephone WAbash 2-4811*

**ILLINOIS CENTRAL RAILROAD**

MAIN LINE OF MID-AMERICA

## MATTHEWS

I can only attempt to give you a feel for Building Requirements. In my company, we spend about 4, 6, even 8, weeks analyzing every part of the proposed operation—we list requirements to be given to the Architect and we derive from the requirements design criteria which will also be given to the Architect—it is on these two documents that this technical work will be based.

### BUILDING REQUIREMENTS

Organization — with manpower and minimum space requirements by department and sex

Functional Relationships Among Departments

Auxiliary Space — lobby & capacity  
auditorium & capacity  
cafeteria & capacity  
(with menu)  
storage areas

Services — comfort air conditioning  
telephone by position and service  
p. a. system  
fire protection control center  
special air conditioning  
lighting  
other

The functional relationships indicated in this manner allow the designer maximum leeway. I believe it is a far better indication of the relationships than can be shown on an area layout since regardless of the

designer's good intentions, a premature area layout introduces a bias into his thinking.

The problem itself with its cost, schedule and other requirements will dictate, to a large extent, the way in which the project should be handled and the people and firms who are best qualified to handle it. I will not dwell on the method and sequence of carrying on the work since your own organization as well as the problem will cause a great deal of variation. However, a quick pass might look like this.

### Requirements

Complete by mid-1963  
Owned Facility  
Economical Method

### Method

Site Selection  
Building Planning  
Lump-sum A-E Contract with Budget  
Design, Concept & Estimate; Review;  
Drawings Estimate; Review;  
Re-work for Bidding  
Bidding  
Analyze & Award Contract  
Construction

There is some parallel thinking which will help you in architect or contractor selection and unless you are completely staffed to perform these phases yourself, the success of

your project will depend on proper selection of outside firms. An owner's organization lacking in experience and poorly organized for the task can look like a group of heroes; or a strong group of highly qualified men can look like a bunch of incompetents depending on the proper selection of Architects and Contractors.

Consider only the problem; set forth the requirements of a satisfactory firm—make these requirements strong; if only two or three firms measure up, the requirements are good; if all are eliminated, then the requirements can be loosened up. In an elimination process such as this, you are playing the odds—it is quite likely that you will eliminate many firms who could have done the job in a highly satisfactory manner, but the chances are that the firms which measure up to your criteria are among the best firms anywhere.

### ARCHITECT SELECTION

#### REQUIREMENTS

Creative Ability  
Cost Consciousness  
Familiarity with Problem  
Ease of Coordination  
Coordinated Design Effort

## FOR SALE

9.9 Acres. Industrial Tract. Adjoining 13 acres available. Mississippi River frontage. Riparian rights.

Deep water dock for tankers.

Within New Orleans Metropolitan Area. 15 minutes from downtown New Orleans.

Served by three railroads. (IC-KCS-NOPB)

Ample water supply for any purpose.

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Realtors

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New Orleans, Louisiana



## INDUSTRIAL PARK DESIGN ASSOCIATES

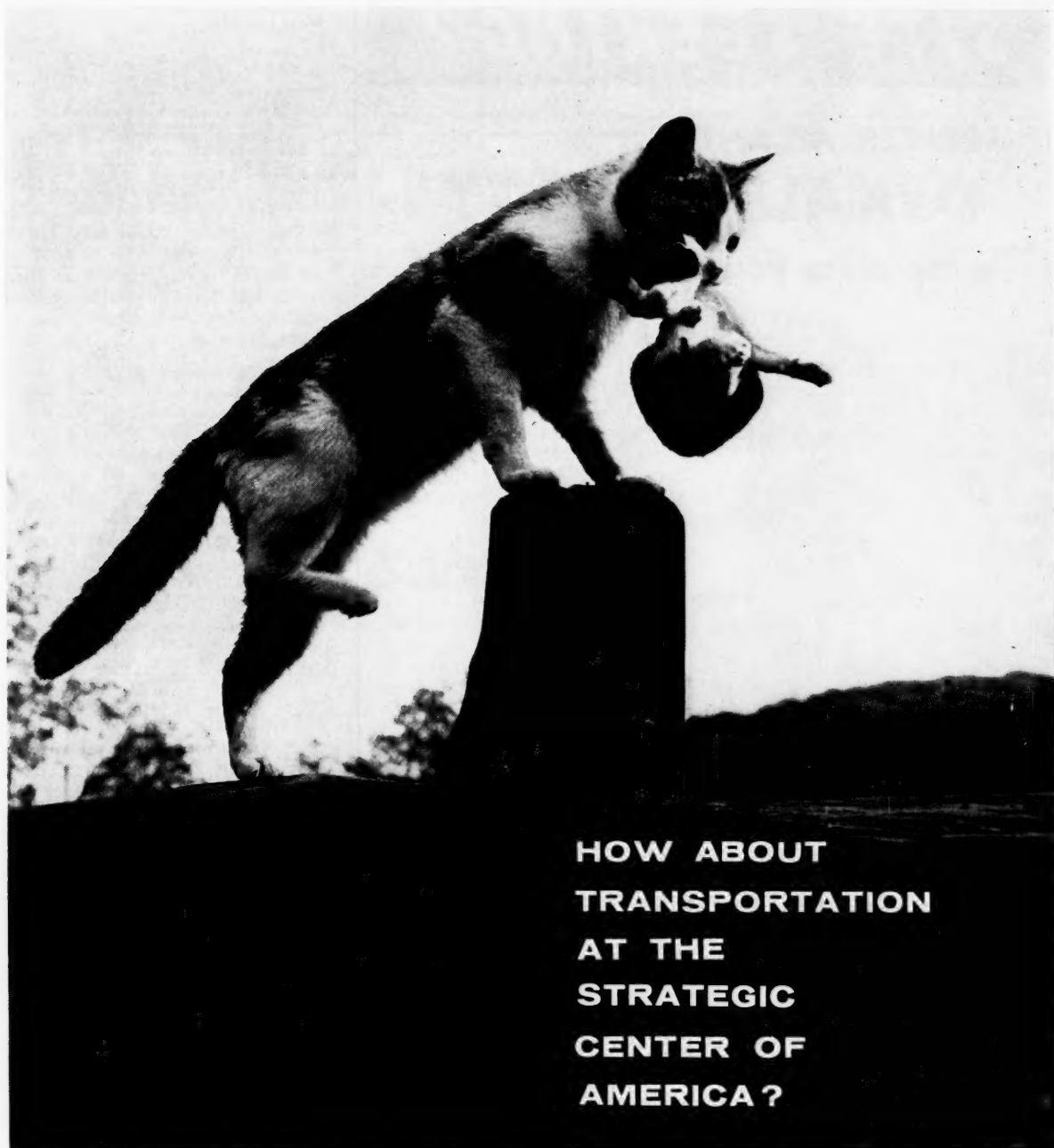


Offer professional services in the planning and design of industrial districts, parks, and sites... complete research service includes economic base studies, aerial photography, surveying, drafting, mapping, zoning analysis, city planning, deed restrictions, performance standards, architectural controls, presentation material, market and feasibility studies... professional organization includes some of the nation's leading specialists in the field of planned industrial development... inquiries are treated promptly and in confidence.

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**G. J. Haven, Manager, Industrial Development, Dept. D-10  
UNION ELECTRIC COMPANY / St. Louis 66, Missouri**



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- Nine choice industrial districts, ready to go.
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**45¢-65¢ sq. ft. per year**  
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☐ Information on DeKalb-Atlanta

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TITLE \_\_\_\_\_  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY & STATE \_\_\_\_\_

Write, Wire or Phone

**M. WM. BROOME**

Industrial Manager

DeKALB COUNTY COMMITTEE OF 100

P. O. DRAWER 739

ATLANTA 22, GEORGIA

TELEPHONE 378-3691

## MATTHEWS

### SCREENING

Awards for excellence in Architecture  
Awards for excellence in Engineering or  
experience in medium-low cost building  
Experience in Midwest  
Experience in Office Buildings of 1 to 5  
million dollars  
New York Home or Branch Office  
Integrated Engineering

The selection process for Contractors is about the same as that for Architects, except that it is more sophisticated and more effective than that for Architects since it can be more objective.

### CONTRACTOR SELECTION

#### REQUIREMENTS

Effective Competition  
Financial Capability  
Management Capability  
Familiarity with Problem  
Attention and Service

#### SCREENING (for 6 to 8 bidders)

Financial Strength—25% budget for job (or 1 million dollars whichever is less)  
Return on Investment Average—8% over 3 years  
Experience in the Area—include 1 firm with remote home office  
Budget is between 10% & 25% of Avg. Annual Volume (3 yrs.)  
Office Construction of 1 to 5 million dollars

If I have implied that my procedure is long and involved then I have misled you. The key to the whole process is defining the problem; that time is essential and should not be hurried, but it will save far more time than it consumes. Once the criteria for contractor selection, for example, are listed a secretary can screen the files and produce a list of those satisfying them in less than 30 minutes. An Architect can do the rest and can be required to fill out a report which assures you that he has done precisely what you want. Even if your files are non-existent, the Architect can tell you who measures up to your criteria. Time is spent, to be sure, but not by you the manager, your job is to define the problem—others will solve it.

If you have planned by defining the problem and have set forth the requirements of solution, you should be so familiar with your plan as to be able to defend it, with logic, to anyone. Perhaps I'm particularly sensitive, but to me an argument based solely on experience, judgment, opinion or technical training is a defense mechanism for a poorly thought-out statement. Use that experience, judgment, opinion and technical training to supplement and reinforce your logic. Planning and thinking on such a basis will result in a better end product—in our case today—a better facility.

## BANKS EXPAND DEVELOPMENT SERVICES

Quietly, often without fanfare but with growing consistency, banks are moving into industrial development. This steady increase is reflected in ID's latest investigation of bank development programs. The response to our questionnaire is spelled out in the listings which follow this article, but certain trends and notable examples bear closer scrutiny here.

Traditionally, the banker was the man to see if you needed confidential information on ideas, people or places which interested you. Banks and bankers were confidential, close-mouthed and careful with their information. Often an investigation of a plant site was pursued with such silence that ground was broken before many locals knew what was happening. Gradually banks analyzed themselves and began to budget money, time and trained personnel toward definite development programs.

Indirect efforts on the part of bank officers lead to direct efforts by organized staffs, so that today the results of ID's new study show that the merits of industrial development versus simple new business are being realized by more and more banks every day. Notably, many of the largest banks (conspicuous exception: the largest one) have not expended efforts on industrial development of specific areas but have accomplished similar end results through nation-wide cooperation with correspondent banks and major industries.

Let's look at each item on our questionnaire (*see page 100*). The fact that direct and indirect plant financing is the most popular activity of banks responding to our survey naturally follows their principal business: money. Actually, this percentage is probably higher than our survey indicates, because some banks who indicated that they did not offer direct or indirect plant financing replied affirmatively to the question on participation in development corporations. Often privately financed development corporations obtain sizeable shares of their capital from banks.

Participation in long-term community improvement programs was listed by nearly three-fourths of the banks, indicating that this activity, while not a direct factor in industrial development, is decidedly popular because of the contributory effect community improvement has on eventual industrialization. Site-seekers today often regard sociological and community factors more critically than such factors as labor

supply, water and power, and so forth. Bank participation in community improvement can be regarded as strong indirect participation in industrial development.

That most banks conduct research on their service areas indicates they are interested in providing the necessary answers when industrial inquiries arrive. Not all banks which do such research offer its results in report form, but generally they are able to answer questions on specific points. The response to our questions on whether banks had data on specific industrial sites, and on basic location factors for their areas, again indicates that the responding banks do have the data available to those who write them, but do not necessarily publish it in a special format.

Almost two-thirds of the banks surveyed indicated that they conduct research on specific sites. This shows an awareness of the value of specific sites to any efforts toward industrial development. The best program is no good unless there is a site, and a good one, where industry can locate.

Promotion of the bank's area through national and direct-mail advertising is about half-way up the popularity list, perhaps because of traditional reticence on the part of the banking fraternity to engage in advertising. However, a quick glance through the pages of any national news or business weekly would indicate that this reticence is vanishing rapidly.

**ID's second annual survey of services provided to site-seeking firms by banking institutions shows a significant increase in this activity. Questionnaires mailed to more than 1000 banks produced replies from some 63 institutions (9% more than last year) which have set up special programs and/or departments to provide professional assistance to expansion-planning executives. Moreover, 10 institutions report international departments geared to assist you in planning new facilities overseas.**

A REFERENCE STUDY BY





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*Scotia* BANK  
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Chicago Representative: Board of Trade Bldg.  
Los Angeles Representative: 611 Wilshire Blvd.  
General Office: 44 King Street West, Toronto  
London Offices: 24-26 Walbrook, E.C.4;  
11 Waterloo Place, S.W.1.

ID-9

The Bank of Nova Scotia,  
Business Development Dept.,  
44 King Street West, Toronto, Canada.

Please mail my free copy of your booklet "Canadian Business Guide" to—

Name \_\_\_\_\_

Address \_\_\_\_\_

Company \_\_\_\_\_

Position \_\_\_\_\_

## BANKS

Our question on whether banks had data on basic location factors for communities was aimed at determining whether banks do their development on area or community bases, and response shows that the former is more popular. Here again, this is data that the banks have on tap to answer any inquiries.

Only 48 per cent of banks surveyed indicate that they offer assembled information in a survey or report form. But the ones that do seem to do a good job, as will be explained below.

Slightly less than half the banks surveyed indicated that they participate in planning and zoning programs. Our experience leads us to interpret this as meaning that they do this on a formal basis to this extent. But the participation is probably much higher than this when one takes into consideration the extent to which bank's management engages in this aspect of industrial development. You will find many planning commissions or zoning groups in the United States with at least one banker member!

There was a ten per cent increase in response to the question on sponsorship of development workshops and orientation sessions over last year, which shows that bank management is regarding this often-overlooked method as a growing tool of industrial development. Actually the popularity of group effort toward the solution of many different types of problems in today's business world and the growing popularity of this method in industrial development would indicate that this is a valuable aid to any development-minded organization.

Only a third of the banks questioned replied that they help set up local development corporations. Again, we feel that this response probably indicates an official policy position and does not reflect the much greater participation by bank executives in local development corporations. In fact, one criterion set up by many state laws on development corporations is that there must be a banker as a member.

The lower response to our question on whether banks help set up urban redevelopment programs is probably due to the fact that virtually all urban redevelopment today



is being done by municipal and federal agencies with highly specialized staffs and the incentive is not as strong for bank participation in this field. Redevelopment for industrial reuse, however, might be the exception where a bank would definitely want to participate.

Bank ownership or part-ownership of industrial sites is near the bottom of the list in responses, probably because of the high response to our question on participation in direct or indirect plant financing, and participation in long-term community improvement programs. Since many banks participate in development corporations, and these development corporations in turn own (in many cases) industrial sites, these banks indulge in indirect ownership of industrial sites. Probably these two questions are opposite sides of the same coin, so to speak, the one with the higher response being simply a more remote form of shared ownership of industrial sites.

Over the months ID's research department receives great quantities of industrial development promotional material, some of which is prepared by experts and some by amateurs. Much of it ends in our "circular file" but the outstanding examples are retained for comment and our endorsement to our readers. Without comparison in the category of bank-prepared development material is an all-meat-no-fat, 63-page book (and each page has useful material, too: no fill or non-essential material here) on "Citric Acid Production in Minneapolis", one of a series of plant location studies by the Industrial Development Division of the Northwestern National Bank there.

Even if you were not interested in citric acid production, we feel that this study could arouse your enthusiasm. From the authoritative analysis of what citric acid is and how much of what ingredients it takes to make so many pounds of this organic acid, through the detailed analysis of the sources of these ingredients, the cost of getting them to the plant, the evaluation of the potential for citric acid in the Minneapolis area, to the social, geographical and economic description of the area this report pulls no

punches and lays the facts on the line.

In our opinion it supplies in readable, logical form, virtually everything an executive might need to make a preliminary decision. Other excellent studies in the Northwestern National Bank's series include a survey of industrial gas use in cities in their area, and "Minnesota's Electronics and Related Science Industries", and others.

Two other excellent examples

have arrived from Hawaii. One is the latest of the fine annual series by the Bank of Hawaii, entitled "Hawaii, the First Year of Statehood", which spells out progress in business, urbanization, industry and other aspects of the Hawaiian economy. The other is from the First National Bank of Hawaii, "A Brief Review of Hawaii for the Businessman", a careful analysis of important factors in the economy of the fiftieth state.



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Favorable land costs — Excellent labor market — Attractive tax structure — Less absenteeism — Superb climate. These are some of the reasons why companies such as Hughes Aircraft, Motorola, General Electric, AiResearch, Goodyear, Reynolds Metals and Sperry-Rand located in sunny, booming Arizona. First National, the state's most experienced bank, has accurate, confidential information on Arizona.

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**"My company is making a survey of this area to determine its potential for our expansion. What are the transportation facilities centering in the Twin Cities?"**

This inquiry by Mr. "X", is an example of the type of question quickly answered in the Northwestern National Bank's Industrial Development headquarters. Staffed by experienced personnel well versed in all phases of industrial development, inquiries are welcomed on:

- Plant site location guidance
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No matter what your interest in our area might be, from vital statistics to available sites, remember we mean it when we say may we help you today!

## Northwestern National Bank

Industrial Development Div.  
620 Marquette Avenue  
Minneapolis 40, Minnesota  
FEderal 2-0123

## BANKS

The remarkable one-hundred per cent growth in value of manufacturing and process (and this excludes sugar and pineapple processing!) in the decade from 1950 to 1960 in Hawaii is not to be overlooked. The First National has also produced a detailed economic study of three of the islands, two sound-color films, and publishes a monthly economic bulletin.

In handy pamphlet form, the Union Planters National Bank of Memphis presents its services to business and industry. Called "77 Banking Services", nearly half of these apply to commercial customers and at least twenty concern expansion. Many of the services of this Memphis bank are available without obligation.

The Marine Midland Banks group in New York state has prepared an informative guide "18 Ways to Attract Business to New York State" which contains, despite its title, many pertinent location factor facts about 18 different areas in the state. Maps pinpoint each area, which is

also described briefly.

Another outstanding bank publication we received was "The Information You Need When Planning a Business in The Netherlands", put out by De Twentsche Bank. After you get past the drawn-out title, you find a neat, 28-page summary of things you need to know when starting an industry or corporation in Holland. A concise insight into Netherlands corporate law, a description of their aid-to-depressed-areas program (similar to ours!), taxes, social security and labor laws, and an explanation of the Dutch obligations under the EEC and EFTA trading agreements is presented in highly readable form.

With one exception the report is written in American instead of British English, a welcome relief from so many imported printed items. There is also a good map showing available industrial sites and a list of additional publications by De Twentsche Bank N. V., Spuistraat 138-150, Amsterdam, Holland.

Following is a geographical reference listing of banks and other financial institutions offering development assistance, either through a full-time department or through the help of key executives, to site-seeking industrialists. The types of services offered vary according to the code listed for each institution. Those banks for which detailed information is given are ones which completed and returned a comprehensive questionnaire. Listings marked by an asterisk did not return this year's questionnaire. Other data were gathered from ID's extensive files, and from other reliable sources. Those concerns which answered a special international development questionnaire have listings containing supplemental information on this aspect of industrial development. We would like to thank the staffs of the cooperating banks, and invite those not listed to supply data for the next reference study in ID.

### CODE CLASSIFICATION

Listed banks do these things for industry:

- A Conduct research on bank's general service area.
- B Conduct research on specific sites.
- C Have data on basic location factors for area.
- D Have data on basic location factors for communities.
- E Have data on actual available industrial sites.
- F Offer data in report form.
- G Offer plant design assistance.
- H Offer direct or indirect plant financing.
- J Own or share in ownership of industrial sites.

### ARIZONA

**First National Bank of Arizona**, 411 N. Central Ave., Phoenix; Glenn A. Pratt, vice president. Area served: Arizona. Deposits: \$349 million. A, B, C, D, E, F, G, H. Reynolds S. Heriot is manager of First National of Arizona's international development activities department.

**First National Bank of Holbrook\***, Holbrook; Area served: Radius of 100 miles; Deposits: \$8.5 million.

**Valley National Bank\***, 141 North Central, Phoenix; Lawrence Mehren, Vice President; Area served: Arizona; Deposits: \$572 million.

### CALIFORNIA

**California Bank\***, 629 South Spring

Street, Los Angeles; Herbert T. Lundahl, Vice President; Area served: Los Angeles metropolitan area; Deposits: \$1.1 billion.

**Bank of America NT & SA**, 300 Montgomery Street, San Francisco; Richard M. Oddie, Assistant Vice President; Area served: California; Deposits: \$10.8 billion. A, B, C, D, E, F, H.

Heading Bank of America's international banking program is David L. Grove, Vice President—International Relations. A staff of over 100 employees in 31 permanent overseas branches can supply credit information, data on business conditions, government regulations on most countries of the free world, and various other services in connection with foreign trade or foreign investments. More than 3000 other employees have principal duties which include international activities.



# No place for guesswork

If you're considering a plant site in California you'll need *complete information* on everything from taxes to transportation facilities. Here's where Bank of America can go to work for you. With more than 700 branches throughout the State, Bank of America can quickly collect all the latest, on-the-spot information. As a result, you receive a site appraisal that is both *detailed* and *impartial*.

Investigating plant sites is just one of the many services Bank of America extends to industry. In

fact, we offer you banking's broadest line of services — including corporate investment advice, collections, international banking and inventory distribution financing. For complete information, write, wire, or call: Bank of America, Area Development Department, 300 Montgomery St., San Francisco — or 660 South Spring St., Los Angeles.

ONE ACCOUNT COVERS ALL CALIFORNIA

## **BANK OF AMERICA**

NATIONAL TRUST AND SAVINGS ASSOCIATION • MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

# SCN

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# SCN

## NATIONWIDE SERVICES

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For full information about Correspondent and Industrial Development Services contact Chauncey W. Lever, Vice-President  
P. O. Box 300, Columbia, S. C.

Telephone—ALpine 6-4201  
TWX—CO 7134  
Bank Wire—ASAR  
Location—900 Assembly St., Columbia, S. C.

# SCN

## SOUTH CAROLINA NATIONAL BANK

W. W. McEachern, President  
Greenville, S. C.

Member Federal Deposit Insurance Corp.

### BANKS

**Crocker-Angelo National Bank\***, 1 Montgomery Street, San Francisco 20; W. H. Smith, Vice President; Area served: northern and central California; Deposits: \$1.5 billion.

**First Western Bank and Trust Company\***, 405 Montgomery Street, San Francisco; Raeburn F. Hay, Vice President; Area served: California; Deposits: \$1 billion.

**Security First National Bank**, 501 S. Spring St., Los Angeles 54; J. Q. Blake, assistant vice president. Area served: southern California. Deposits: \$3.4 billion. A. B. C. D. E. F. H.

### CONNECTICUT

**The Connecticut Bank and Trust Company\***, 803 Main Street, Hartford; Graham R. Treadway, Vice President; Area served: One third of Connecticut; Deposits: \$394 million.

### FLORIDA

**Barnett National Bank of Jacksonville**, West Bay Station, Jacksonville 2; Harold A. Martin, Vice President; Area served: Florida and southern Georgia; Deposits: \$130 million. A. B. C. D. E. F.

**Broward National Bank**, P. O. Box 61, Fort Lauderdale; Paul E. Basye, Assistant Vice President. Area served: Broward County. Deposits: \$60 million.

**The Exchange National Bank of Tampa\***, P. O. Box 1809, Tampa 1; Brintnall H. Merchant, Vice President; Area served: Tampa and Florida West Coast; Deposits: \$114 million.

### GEORGIA

**The Citizens and Southern National Bank\***, Marietta and Broad Streets, Atlanta; F. Adrian Norton, Vice President; Area served: Georgia; Deposits: \$558 million.

**First National Bank of Atlanta**, P. O. Box 4148, Atlanta 2; Robert Dannenbaum, Manager - Special Services Department; Area served: Metropolitan Atlanta; Deposits: \$440 million. A. B. C. D. E. F. H.

W. R. Anthony is manager of the First National's International Department, which has three other full-time employees and three part-time employees. This department provides market information, economic data and tax and exchange information to concerns investigating overseas expansion.

**Trust Company of Georgia**, Atlanta; Allen H. Douglas, Manager Industrial Development Department; Area served: Georgia; Deposits: \$229 million. A. B. C. D. E. F.

### HAWAII

**First National Bank of Hawaii**, Bishop and King Streets, Honolulu 1; Dr. Thomas

K. Hitch, Vice President and Director of Economic Research; Area served: Hawaii; Deposits: \$313 million. A. B. C. D. E. F. H. J.

**Bank of Hawaii**, Honolulu; James H. Shoemaker, Vice President and Director of Business Research; Area served: Hawaii and Guam; Deposits: \$331 million. A. B. C. D. E. F. H. J.

Bank of Hawaii can supply information and reports on Pacific area countries.

### INDIANA

**Citizens National Bank of Evansville**, 19 N.W. Fourth Street, Evansville; J. Glenn Babb, assistant Cashier. Area served: southern Indiana, western Kentucky, southern Illinois. Deposits: \$63 million. A. B. C. D. E. F. H. J.

**Gary National Bank\***, 504 Broadway. Gary; Don L. Robinson, Vice President; Area served: Lake County, Indiana; Deposits: \$130 million.

**The Second National Bank of Richmond**, Richmond; Howard C. Tones, Executive Vice President; Area served: Wayne County, Indiana and part of Treble County, Ohio; Deposits: \$45 million. F. H.

### IOWA

**Iowa-Des Moines National\***, Des Moines 4; Marcellus M. McMichael, Vice President; Area served: Iowa; Deposits: \$130 million.

### LOUISIANA

**Whitney National Bank of New Orleans\***, St. Charles & Gravier, New Orleans; Area served: Orleans Parish and adjoining parishes; Deposits: \$417 million.

**The First National Bank of Shreveport\***, Market at Milam Streets, Shreveport; Area served: Shreveport, Vivian, and surrounding areas; Deposits: \$139 million.

### MARYLAND

**Union Trust Company of Maryland**, Baltimore and St. Paul Streets, Baltimore 3; Area served: Baltimore City and surrounding counties; Deposits: \$228 million.

Edwin T. Johnson, assistant vice president, is responsible for international development activities at Union Trust Co.

### MICHIGAN

**National Bank of Detroit**, Woodward at Fort Street, Detroit 32; Charles H. Schmidt, Vice President; Area served: Wayne, Macomb & Oakland counties; Deposits: \$1.8 billion. H.

Gerald B. O'Neill, vice president, heads a staff of 37 employees of the International Department of the National Bank of Detroit. Services provided for firms investigating overseas expansion include, states Mr. O'Neill, "introducing them to

## RESULTS OF ID's 1961 BANK SURVEY

Responses indicate banks' participation in the following development activities:

Offer direct or indirect plant financing .....	81%	Promote bank's area through national advertising .....	56%
Participate in long-term community improvement programs .....	74%	Offer data in report form .....	48%
Conduct research on the bank's general service area .....	70%	Participate in planning and zoning programs .....	48%
Have data on actual available industrial sites .....	70%	Sponsor development workshops or orientation sessions .....	37%
Have data on basic location factors for area .....	67%	Help set up local development corporations .....	33%
Conduct research on specific sites .....	63%	Help set up urban redevelopment programs .....	30%
Promote bank's area through direct mail campaigns .....	63%	Offer plant design assistance .....	11%
Have data on basic location factors for communities .....	56%	Own or share in ownership of industrial sites .....	11%
		Produce or distribute development motion pictures .....	11%



## BANKS

our host of friends and correspondents overseas, explaining the intricacies of foreign exchange control, making available interpretations regarding political and investment climates, furnishing them with trade opportunities that have been brought to our attention, and providing statistical data".

**Old Kent Bank and Trust Company,** 72 Monroe Avenue, N. W., Grand Rapids 2; Area served: Greater Grand Rapids Area; Deposits: \$251 million. H.

### MINNESOTA

**First National Bank of Minneapolis\*,** Second Avenue and Sixth Street, Minneapolis; Donald W. Gustafson, Vice President; Area served: Upper midwest United States; Deposits: \$1.6 billion.

**Northwestern National Bank of Minneapolis,** 620 Marquette Avenue, Minneapolis 40; L. E. Gilbert, Vice President; Area served: Greater Minneapolis Area; Deposits: \$478 million. A, B, C, D, E, F, G, H, J.

**First National Bank of Saint Paul,** 332 Minnesota Street, Saint Paul 1; Rodney Q. Selby, Vice President; Area served: Saint Paul, Ramsey County, Parts of Dakota and Washington Counties; Deposits: \$333 million. A, B, C, E, H.

**Winona National and Savings Bank\*,** 204 Main Street, Winona; S. J. Kryzsko, President; Area served: Winona trade area; Deposits: \$13 million.

### MISSISSIPPI

**Deposit Guaranty Bank and Trust Company\*,** Capitol at Lamar Street, P. O. Box 1200, Jackson; J. H. Hines, Senior Vice President, Business Development Department; Area served: Mississippi; Deposits: \$144 million.

### MISSOURI

**Commerce Trust Company,** P. O. Box 248, Kansas City 41; Forrest D. Byars, Vice President; Area served: Middle West United States; Deposits: \$458 million. A, B, E, F, H.

**First National Bank in St. Louis\*,** 510 Locust Street, St. Louis 1; John F. Hallett, Vice President; Area served: St. Louis, Missouri-East St. Louis, Illinois metropolitan area; Deposits: \$532 million.

### NEBRASKA

**The First Trust Company of Lincoln,** Nebraska\*, Lincoln; B. R. Anderson, Vice President; Area served: Nebraska.

### NEVADA

**First National Bank of Nevada\*,** Reno; Lester W. Scott, Vice President; Area served: Nevada; Deposits: \$264 million.

### NEW JERSEY

**The National State Bank of Newark\*,** 810 Broad Street, Newark 1; Area served: Essex County; Deposits: \$365 million.

### NEW MEXICO

**New Mexico Bank and Trust Company\*,** Hobbs; E. F. Howe, President; Area served: Lea County; Deposits: \$21 million.

### NEW YORK

**National Commercial Bank & Trust Co.,** 60 State Street, Albany 1; Richard E. Bolton, Assistant Vice-President, Area Development Department. Area served: northeastern New York state. Deposits: \$359 million. A, B, C, D, E, F, H, J.

Mr. Bolton states that the National Commercial Bank & Trust Company offers a complete international program through the facilities of Morgan Guaranty Trust Company of New York. He further states that in conjunction with the International Department of Morgan Guaranty they are "looking for an expansion of this program in the future".

(Continued on Page 103)



## I. D. BRIEFS



WASHINGTON. Commerce Secretary Hodges has delineated duties and functions of six existing federal agencies which will operate with the Area Redevelopment Administration to implement the \$394 million aid program. In an effort to avoid duplication and to attain maximum utilization of existing federal resources, Hodges pointed out in a 14-page memorandum that three agencies — Labor, HEW and Housing and Home Finance Agency — al-

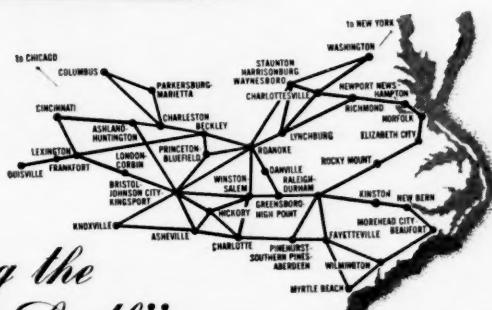
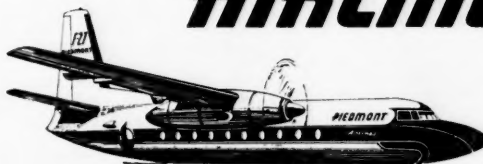
ready have statutory responsibilities. Additionally, the plan calls for Agriculture to formulate standards for classification of rural redevelopment areas; Interior to do the same for reservation-based (Indian) and natural resource-based redevelopment areas; and Small Business Administration to provide certain technical assistance. "The goal of the Area Redevelopment Act is to help qualified communities help themselves in devising broad-scale assaults on chronic joblessness", said Mr. Hodges.

W. C. Palfreyman (left) who heads the state-wide development program in Utah and Gus Backman (right), executive secretary of the Salt Lake City Chamber of Commerce, have good reason to smile. According to latest figures, Utah has one of the

(Continued on Page 102)

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### Industrial Districts

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**METROPOLITAN ATLANTA** — Nine Industrial Districts offering planned sites of varying location, size, price. Services available: (a) optional, (c) (e) (g) (f) optional, (p) (r) (s) (t) (w). For data on these and other sites at Atlanta contact F. Wm. Broome (member, AIDC) Manager, Committee of 100 DeKalb County, P. O. Drawer 759, Atlanta 22, Ga. Telephone 378-3691.

#### Illinois

**ILLINOIS INDUSTRIAL VALLEY:** Cities of La Salle, Peru, Oglesby, Spring Valley, Ladd, DePue offer planned industrial sites. Excellent transportation via the Illinois River, 7 major railroads, numerous carriers. 2 U.S. Highways. Skilled workers. Power in abundance. Active ID organization to serve you. Robert Blomgren, Director, Box 446, La Salle, Illinois. Phone: CA. 3-0227. Services: (a) optional, (c), (e), (f) optional, (g), (p), (r), (s), (t), (w).

#### Iowa

**IOWA "MANUFACTURING MEADOWS"** — Clinton, Iowa (population 35,000). 138 miles west of Chicago on Mississippi River and Lincoln Highway (U. S. 30). 190 acres within city. Master plan by Skidmore, Owings & Merrill. Served by Chicago and North Western Railroad. Developed by Clinton Development Company, a civic-non-profit corporation. Chapel 2-4536. R. J. Stapleton, Managing Director. Services available: (a) (optional), (c), (e), (g), (f) (optional), (p), (r), (t), (w), restrictions.

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**BIDDEFORD** — SACO AREA: Southern Maine, 2 industrial parks, airport, 500,000 square feet, prime manufacturing space. On U. S. Route 1 on main line of Boston & Maine R.R., and truck routes. Ample power and water. Financing. 90 Minutes to Boston. 15 minutes to Portland, Maine. Capable, experienced labor. Pleasant living year 'round, good educational facilities. Full details in confidence — Write Hugh Marshall, Ind. Agent (Member AIDC), Journal Bldg., Biddeford, Maine. Phone AT 4-5386.

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**CALGARY, CANADA** — Highfield Industrial Park in Canada's oil, gas centre. Industrial sites in city-developed district. Package price \$6,750 acre. Services: (e), (g), (r), (s), (t), (w). Apply K. S. Ford, Industrial Co-ordinator, City Hall, Calgary, Alberta, Canada.

**NEWMARKET, ONTARIO**, Industrial Park — Ind. Comm. Wm. Anderson, Box 204. Phone TW 5-2792. Est. 1961—125 acres services A. C. E. F. Gn, Pa. R. S. T. W. P.

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Stewart G. Neel, Manager

### BRIEFS

(Continued from Page 101)

lowest overall unemployment ratios — a state-wide figure of a little over 2 percent and several major cities with unemployment of only 1½ percent of the working force. Favorable factors include large new missile plants as well as rapid diversification in the Salt Lake City region.

\* \* \*

### DEVELOPMENT MINDED INDUSTRIALISTS IN THE NEWS:

**Livingston Goddard** is the new president of Waterman Pen Co. . . . Chicago Pneumatic Tool's **Norman Readman** has been upped to president succeeding **Guy J. Coffey**, new board chairman . . . **Ralph S. Schmitt**, Cleveland industrialist, was elected chairman of the board of the Northwest Paper Co. . . . **John H. Mathis** is the new president of Lone Star Cement Corp. . . . named president of American Safety Razor Co. was **Leslie E. Parkhurst**. . . **Lee Talley** succeeded **William E. Robinson** as Coca-Cola chairman. . . . Cyanamid of Canada, Ltd., has moved **Burton F. Bowman** to president . . . new heads of Jessop Steel subsidiaries will be **S. J. Clokey**, Jessop Steel of Canada, Ltd., and **T. W. Gabriel**, Jessop Steel International . . . International Paper will be led by **Lamar M. Fearing** and **Richard C. Doane** will be chairman of the board . . . **Robert G. Taubors** will be president and chief executive officer of Textron Electronics division of Textron, Inc. . . . **Warren C. Hume** has been upped to president of the data processing division of IBM, succeeding **Gilbert E. Jones** who will be assistant to IBM's new prexy **Albert L. Williams**.

## BANKS

(Continued from Page 101)

**United States Trust Company of New York\***, 45 Wall Street, New York 5; Berkeley D. Johnson, Executive Vice President; Area served: United States; Deposits: \$188 million.

**Meadow Brook National Bank**, 60 Hempstead Avenue, West Hempstead, Long Island; Mead W. Stone, Vice President; Area served: Long Island and New York City; Deposits: \$559 million. A, B, C, D, E, H.

Charles A. Grace, vice president, is in charge of Meadow Brook National Bank's international development department at 1230 Avenue of the Americas, New York City, consisting of three other full-time employees and 52 employees whose duties entail certain aspects of international development work. Says Mr. Grace, "This International Department has considerable references on all available sources of information covering questions that arise continuously in connection with overseas locations principally as they apply to identified products and services". This department also distributes monthly news letters in five foreign languages.

### NORTH CAROLINA

**North Carolina National Bank\***, P. O. Box 120, Charlotte 1; John A. Tate, Jr., Vice President; Area served: North Carolina; Deposits: \$450 million.

**Wachovia Bank and Trust Company**, Winston-Salem; Brant R. Snively, Senior Vice President; Area served: Southeastern United States; Deposits: \$681 million. A, B, C, D, E, F, H, J.

William C. Edwards, Jr., is manager of Wachovia International, a division of Wachovia Bank and Trust. A staff of three full-time and 13 part-time people can supply economic and trade reports, collecting service, and financing and other data on overseas expansion opportunities. They have published a 16-page handbook on international trade and financing, "To Help You Buy and Sell Abroad".

### OHIO

**The Central Trust Company\***, Cincinnati 1; Donald R. Steelman, Market Research Analyst; Area served: Hamilton County and surrounding district; Deposits: \$249 million.

**The Cleveland Trust Company\***, 916 Euclid Avenue, Cleveland 1; F. J. Waldeck, Vice President; Area served: Greater Cleveland and surrounding counties; Deposits \$1.3 billion.

### OKLAHOMA

**The First National Bank and Trust Company\***, 120 North Robinson, Oklahoma City 1; Oscar Monrad, Vice President; Area served: Metropolitan Oklahoma City; Deposits: \$233 million.

**National Bank of Tulsa\***, Tulsa; L. Harold Wright, Vice President; Area served: northeast Oklahoma; Deposits: \$251 million.

### SOUTH CAROLINA

**The Citizens and Southern National Bank of South Carolina\***, Charleston; Hugh M. Chapman, Assistant Vice President; Area served: South Carolina; Deposits: \$110 Million.

**The South Carolina National Bank**, SCN Central Office Building, Columbia; Chauncey W. Lever, Vice President; Area served: South Carolina; Deposits: \$287 million. A, B, C, D, E, F, G, H, J.

### TENNESSEE

**First National Bank of Memphis**, 127 Madison Ave., Memphis; Hugh F. Sinclair, vice president. Area served: Tennessee and south central states. Deposits: \$291 million. A, C, D, E, F, G, H.

(Continued on Page 104)



## RECENT RELEASES

By Suzanne Johnson

### GENERAL REPORTS

**Statistical Geography** by Otis Dudley Duncan, Ray P. Cuzzort and Beverly Duncan. The authors provide an inclusive, concise appraisal of the methodological problems of analyzing area data, a framework for the application of statistical techniques.

They identify four major types of investigation using area data and characterize each in terms of its methodological assumptions, the types of data used (by choice or necessity), and the problems of accurately manipulating them. The Free Press, 119 W. Lake Street, Chicago, Illinois. 1960, 191 pages, \$6.00.

**Industrial Building.** Proceedings of the Industrial Building Congress, December, 1960. Section headings include Determining the Best Facility for a Company's Needs, Some Critical Financial Questions, Modernization Versus a New Plant, Employee Services, Methods of Designing Flexibility Into Your Plant, How a Small Company Built Two Small Plants, How a Large Company Built a Small Plant, Modernizing a 75-Year-Old Building and Controlling Costs During Construction. Clapp & Poliak, Inc., 341 Madison Avenue, New York, New York. 1961, 232 pages.

**The Stages of Economic Growth,** A non-Communist Manifesto by W. W. Rostow. Cambridge University Press, 32 East 57th Street, New York 22, New York. 1960, 178 pages, \$1.45.

**Official Seaway Maritime Directory, 1961.** The Fourth Seacoast Publishing Company, Inc., 4461 West Jefferson Avenue, Detroit 9, Michigan. 1961, 710 pages, \$15.

**Planning with Scale Models.** Model Planning Company, Inc., 164 Greenway W., New Hyde Park, New York. 1961, 8 pages.

### AREA REPORTS

**Question and Answer Guide on the Ohio Development Corporation Law.** Industrial Development Department, Ohio Chamber of Commerce, Columbus 15, Ohio. 1961, 26 pages.

**Municipal Assistance to Location of Industry** by Stewart Fyfe. A Canadian study of tax concessions and other inducements. Institute of Public Affairs, Dalhousie University, Halifax, Nova Scotia. 1961, 36 pages, \$1.25.

**Florida's New Industrial Plants, 1960.** Industrial Division, Florida Development Commission, Tallahassee, Florida. 1961, 56 pages.

**Industrial Lancashire and Merseyside, 1961.** Lancashire and Merseyside Industrial Development Association, Queen's House, Queen Street, Manchester 2, England. 1961, 76 pages.

**The Union-Tribune Index of San Diego Business Activity.** Irvine W. Reynolds, chief economist, Union-Tribune Publishing Co., 940 Third Avenue, San Diego 12, California. 1961, 59 pages.

**1961-62 Directory, Scientific Resources in the Washington, D. C. Area.** Metropolitan Washington Science Bureau, Metropolitan Washington Board of Trade, 1616 K. Street, N. W., Washington 6, D. C. 1961, 61 pages, \$2.

**Industrial Survey — Pike County,** Mississippi. Pike County Industrial Commission, 212 Enterprise-Journal Building, McComb, Mississippi. 1961, 116 pages.

**Luxembourg For Your Industry,** Board of Industrial Development, Grand Duchy of Luxembourg, 200 East 42nd Street, New York 17, New York. 1960, 200 pages.

**Facts About Germany** by Professor Helmut Arntz. Franz Steiner Verlag, Bahnhofstraße 39, Wiesbaden, West Germany. 1960, 250 pages.





# EXPANSION PLANNING INDEX

## PLANT LOCATION SERVICES:

**Bank of America**, Mr. Richard M. Oddie, Assistant Vice President, 300 Montgomery Street, San Francisco 20, California. (Ad page 99)

**Baltimore County Industrial Development Commission**, Mr. H. B. Staab, Director, County Office Building, Towson, Maryland. (Ad 3rd Cover)

**Bismarck Industries, Inc.**, Mr. Evan E. Lips, President, 218 East Broadway, Bismarck, North Dakota. (Ad page 53)

**Braintree Industrial Development Commission**, Mr. Wm. G. Brooks, Chairman, 250 West Street, Braintree 84, Massachusetts. (Ad page 4)

**Greater Burlington Industrial Development Corporation**, Mr. Charles D. Townsend, Executive Director, 191 College Street, Burlington, Vermont. (Ad page 2)

**Citizens for Industrial Progress**, P.O. Box 96, Ash-tabula, Ohio. (Ad page 84)

**Citizens & Southern National Bank**, Mr. F. Adrien Norton, Assistant Vice President, Industrial Development Department, Marietta and Broad Streets, Atlanta, Georgia. (Ad 4th Cover)

**Cleveland Chamber of Commerce**, Mr. Edward P. Hanak, Manager Industrial Development, 400 Union Commercial Building, Cleveland, Ohio. (Ad page 77)

**Columbus & Southern Ohio Electric Company**, Mr. R. S. Westhoven, 215 North Front Street, Columbus 15, Ohio. (Ad page 79)

**The Dayton Power & Light Company**, Mr. Carl J. Fuhrmann, Manager, Area Development, 25 North Main Street, Dayton, Ohio. (Ad page 87)

**DeKalb County Chamber of Commerce**, Mr. F. William Broome, Manager, P.O. Box 759, Atlanta 22, Georgia. (Ad page 94)

**The East Ohio Gas Company**, Mr. Wm. R. Pringle, Director of Development, East Ninth at Superior, Cleveland 14, Ohio. (Ad page 85)

**Empire Industrial Sites**, Timothy McCarthy Construction Company, Inc., Timothy McCarthy, President, 1785 Cheshire Bridge Road, N.E., Atlanta 9, Georgia. (Ad page 90)

**First National Bank of Arizona**, Mr. Glenn Pratt, Vice President, 411 North Central Avenue, Phoenix, Arizona. (Ad page 97)

**The First National Bank of Atlanta**, Mr. Robert Dannenbaum, Special Service Department, P.O. Box 4148, Atlanta, Georgia. (Ad 2nd Cover)

**Georgia Power Company**, Mr. Gene A. Yates, Jr., Vice President, P.O. Box 1719, Atlanta, Georgia. (Ad page 55)

**Illinois Central Railroad**, Mr. J. S. Frost, Manager, 135 East 11th Place, Chicago, Illinois. (Ad page 91)

**Industrial Sites, Inc.**, Mr. Alex G. Siegler, 5117 Lee Road, Cleveland 37, Ohio. (Ad page 86)

**Nickel Plate Road**, Mr. Martin H. Markworth, Industrial Commissioner, 626 Terminal Tower Building, Cleveland 13, Ohio. (Ad page 82)

**North Dakota State Chamber of Commerce**, Greater North Dakota Association, Mr. Donald C. Gackle, Manager, P.O. Box 1781, Fargo, North Dakota. (Ad page 4)

**Northern States Power Company**, Mr. Robert F. Mueller, Supervisor, Industrial Development, 15 South Fifth Street, Minneapolis, Minnesota. (Ad page 15)

**Northwestern National Bank of Minneapolis**, Mr. L. E. Gilbert, Vice President, Industrial Development, 620 Marquette Avenue, Minneapolis 40, Minnesota. (Ad page 98)

**The Bank of Nova Scotia**, Mr. Robert E. Oliver, Business Development Department, 44 King Street, West, Toronto, Ontario, Canada. (Ad page 96)

**Odessa Chamber of Commerce**, Mr. Ray W. Hedges, Executive Vice President, 211 West Third Street, Odessa, Texas. (Ad page 52)

**State of Ohio**, Department of Industry & Economic Development, Mr. Koder M. Collision, Director, State Office Building, Columbus, Ohio. (Ad page 88)

**The Ohio Fuel Gas Company**, Mr. M. E. White, 99 North Front Street, Columbus, Ohio. (Ad page 81)

**Ostendorf-Morris Company**, Mr. H. J. Brooks, Assistant Secretary, 1717 East Ninth Street, Cleveland, Ohio. (Ad page 84)

**Commonwealth of Pennsylvania**, Department of Commerce, Mr. Wm. R. Davlin, Secretary, South Office Building, Harrisburg, Pennsylvania. (Ad page 5)

**Piedmont Airlines**, Mr. W. G. McGee, Smith Reynolds Airport, Winston-Salem 1, North Carolina. (Ad page 101)

**Puget Sound Power & Light Company**, Mr. Stewart G. Neel, Manager, Area Development, 1400 Washington Building, Seattle 1, Washington. (Ad page 102)

**Sandusky Area Chamber of Commerce**, Mr. David K. Tabor, P.O. Box 620, Sandusky, Ohio. (Ad page 86)

**South Carolina National Bank**, Mr. Chauncey W. Lever, Vice President, Central Office Building, Columbia, South Carolina. (Ad page 100)

**Southern Bell Telephone & Telegraph Company**, Mr. T. Clack Tucker, Division Public Relations Manager, 51 Ivy Street, N.E., Atlanta 3, Georgia. (Ad page 54)

**Texas Power & Light Company**, Mr. J. D. Eppright, Director, Industrial Development, P.O. Box 6331, Dallas 22, Texas. (Ad page 3)

**City of Thomasville, Industrial Promotion & Expansion**, Mr. Herschel Snuggs, Acting Director, Box 975, Thomasville, Georgia. (Ad page 2)

**City of Toledo**, Mr. L. M. Thompson, Jr., 525 Erie Street, Toledo, Ohio. (Ad page 83)

**Union Electric Company**, Mr. G. J. Haven, Manager, Industrial Development, 315 North Twelfth Boulevard, St. Louis, Missouri. (Ad page 93)

**Union Pacific Railroad**, Mr. A. C. Ritter, Chief Executive Officer, Land Division, 1416 Dodge Street, Omaha 2, Nebraska. (Ad page 9)

## PLANT CONSTRUCTION AND INDUSTRIAL SERVICES:

**Stran-Steel Corporation**, Mr. Edward J. Klein, Detroit 29, Michigan. (Ad page 11)

## OTHER:

**American Cresote Works, Inc.**, Mr. S. B. Braselman, Jr., Vice President, For Waguespack Pratt, Inc., 1305 Dublin Street, New Orleans, Louisiana. (Ad page 92)

## BANKS

(Continued from Page 103)

**Union Planters National Bank of Memphis**, 67 Madison Avenue, P. O. Box 387, Memphis 1; W. Porter Grace, Vice President; Area served: south central United States; Deposits: \$346 million. A, B, C, D, E, F, G, J.

**Commerce Union Bank\***, 400 Union Street, Nashville 3; Charles H. Potter, Vice President; Area served: middle Tennessee; Deposits: \$135 million.

**First American National Bank**, 326 Union Street, Nashville 2; C. W. Warterfield, Vice President; Area served: Tennessee, southern Kentucky, north Alabama and Mississippi; Deposits: \$273 million. A, B, C, E, H.

## TEXAS

**First National Bank in Dallas**, 1401 Main Street, Dallas 2; Thomas W. Finney, Vice President — Industrial Development; Area served: Texas; Deposits: \$706 million. A, B, C, D, E, F, H.

**Republic National Bank of Dallas**, Pacific and Ervay, Dallas 22; Edward N. Kerr, Vice President; Area served: Dallas County; Deposits: \$923 million. A, B, C, D, E, H.

**Texas Bank and Trust Company**, Main and Lamar Streets, Dallas; Leon M. Huff, Jr., Vice President; Area served: Texas, southern Oklahoma, western Louisiana, eastern New Mexico; Deposits: \$110 million. A, B, C, D, E, F, G, H.

**Continental National Bank of Fort Worth\***, P. O. Box 910, Fort Worth 1; Harold S. Foster, Vice President; Area served: West Texas; Deposits: \$76 million.

**The First National Bank of Fort Worth\***, P. O. Box 2260, Fort Worth; Haynes Morris, Assistant Vice President; Area served: Fort Worth, Tarrant County and adjacent area; Deposits: \$220 million.

**The Fort Worth National Bank**, P. O. Box 2050, Fort Worth 1; G. O. Barney, Vice-President; Area served: southwest United States; Deposits: \$288 million. A, B, C, D, H.

**Bank of the Southwest National Association\***, P. O. Box 2629, Houston; William B. Black, Jr., Vice President & Manager — Banking Relations; Area served: Houston, Harris County, and Gulf Coast Area; Deposits: \$378 million.

**The Orange National Bank**, P. O. Box 969, Orange; H. S. Peterson, President; Area served: Orange County; Deposits: \$18 million. A, E, H.

**Frost National Bank**, 101 Main Plaza, P. O. Box 1600, San Antonio 6; R. E. Fawcett, Jr., Assistant Vice President; Area served: southwest Texas; Deposits: \$200 million. A, B, H.

H. M. Ortiz, assistant vice president, heads Frost National's international development department. Working through correspondent banks in Mexico, this department provides information for firms investigating expansion opportunities south of the border.

## UTAH

**First Security Bank of Utah, N. A.\***, 25th and Washington Blvd., Ogden; Area served: Utah; Deposits: \$292 million.

**Tracy-Collins Bank & Trust Company**, 151 South Main Street, Salt Lake City; Blaine M. Simons, Assistant Vice President; Area served: north central Utah; Deposits: \$22 million. C, E, H.

## WASHINGTON

**Seattle-First National Bank**, P. O. Box 3586, Seattle 24; Miner H. Baker, Vice President and economist; Area served: Washington state; Deposits: \$966 million. A, B.



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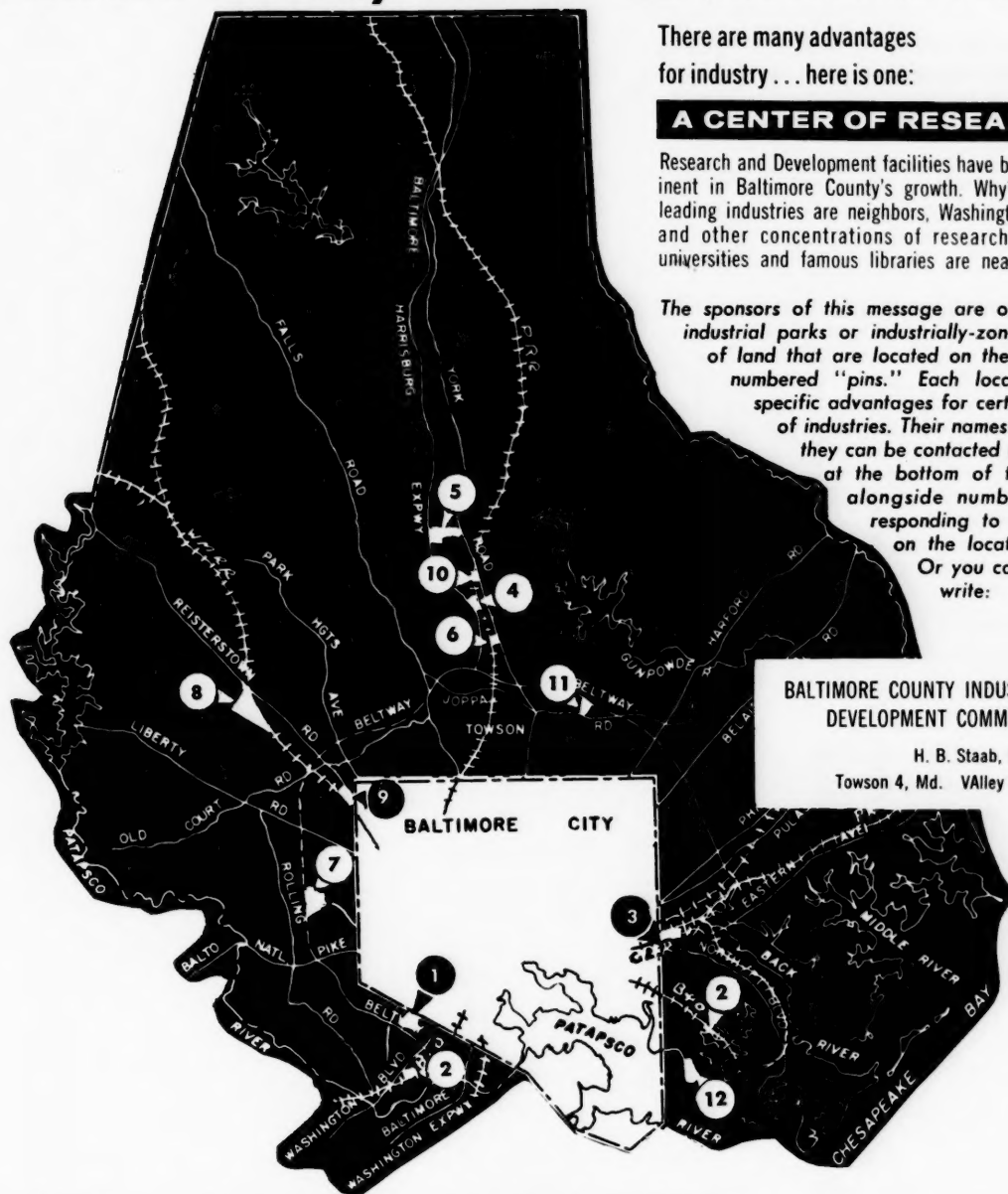
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The sponsors of this message are owners of industrial parks or industrially-zoned tracts of land that are located on the map by numbered "pins." Each location has specific advantages for certain types of industries. Their names and how they can be contacted are listed at the bottom of the page alongside numbers corresponding to the ones on the location pins. Or you can call or write:

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Towson 4, Md. VALLEY 3-3000

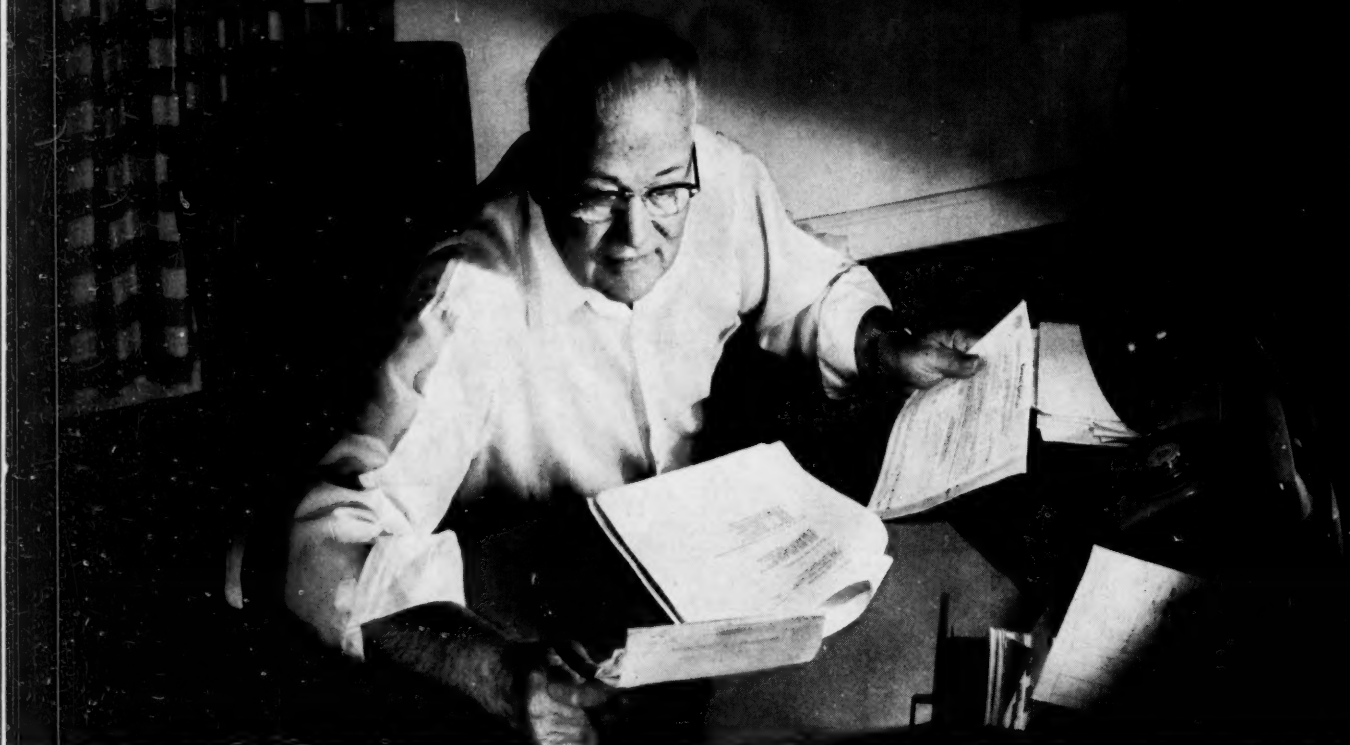


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| <b>1</b> Arbutus-Halethorpe Area<br>Samuel M. Pistorio<br>3908 Coolidge Avenue<br>Baltimore 29, Md. (CI. 2-0500) | <b>2</b> Mr. Thomas G. Gordon<br>Industrial Agent<br>Baltimore & Ohio R.R.<br>Baltimore, Md. (LE. 9-0400)            | <b>3</b> Canton Company of Baltimore<br>300 Water Street<br>Baltimore 3, Maryland<br>(LE. 9-5126)                  | <b>4</b> Parker W. Frames, S. I. R.<br>Industrial Specialists<br>Lord Baltimore Hotel<br>Baltimore 3, Md. (SA. 7-2284)               |
| <b>5</b> Greater Baltimore<br>Industrial Community<br>414 York Road<br>Towson 4, Md. (VA. 3-3441)                | <b>6</b> Kilmarnock Associates<br>Kilmarnock Industrial Park<br>923 Munsey Building<br>Baltimore 2, Md. (SA. 7-1686) | <b>7</b> Meadows Industrial Park<br>2406 Greenmount Avenue<br>Baltimore 18, Maryland<br>(HO. 7-4970)               | <b>8</b> Owings Mills Industrial Park<br>c/o Frank S. Nicoll, Jr.<br>Milford Mill Rd. & W. Md. R.R.<br>Baltimore 8, Md. (HU. 6-7000) |
| <b>9</b> William F. Chew<br>Pikesville Industrial Park<br>Pikesville 8, Maryland<br>(HU. 6-8000)                 | <b>10</b> Ira C. Rigger, Inc.<br>(N. Central & Texas Parks)<br>General Contractors<br>Cockeysville, Md. (NO. 6-1800) | <b>11</b> Mr. Thomas W. Offutt<br>Towson Industrial Park<br>403 Washington Avenue<br>Towson 4, Md. (VALLEY 5-7300) | <b>12</b> Sollers<br>630 South Catherine St.<br>Baltimore 23,<br>Maryland  |

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